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ABSTRACT

A project was developed to create a training procedure for preparing persons with non-teaching professional degrees to become teachers of vocational agriculture/agribusiness. The project involved (1) surveying state supervisors of agricultural education to determine the utilization made of persons with non-teaching professional degrees as teachers of vocational agriculture; (2) surveying state supervisors of agricultural education, teacher educators in agricultural education, and a sample of teachers to evaluate the strategies used in recruiting and training persons with non-teaching professional degrees to be teachers of vocational agriculture/agribusiness; and (3) developing, printing, and distributing procedures for recruiting, selecting, and preparing such persons as teachers of vocational agriculture/agribusiness. (These procedures are included in this document, along with the final report, and are also included separately in ERIC as document CE 019 063.) The survey data analysis involved the establishment of frequency distributions, means, standard deviations, and percentages and the use of analysis of variance and Duncan's New Multiple Range Test. It was found that 79% of the states in the U.S. have an inadequate supply of professionally trained teachers of vocational agriculture/agribusiness. Thirty states use teachers with non-teaching professional degrees. A variety of recruitment strategies are used in obtaining teachers, with the most effective being individual contact. (Survey instruments are appended.) (Author/CT)

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FINAL REPORT

Project No. 498AH70027
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PROGRAMS FOR TRAINING VOCATIONAL TEACHERS IN SELECTED AREAS OF TEACHER SHORTAGE

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PREFACE

Securing an adequate number of personnel who have high levels of competence has been one of the problems in vocational education in agriculture/agribusiness. Shortages of teachers have existed in many states in the United States in recent years. Various approaches have been used in trying to alleviate this problem.

A number of states have recruited persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness. The research reported on in this document represents an attempt to determine what these states have done, evaluate the practices they have utilized, and develop a procedure for preparing such persons to be teachers. It is hoped that this effort will result in the teachers who have non-teaching professional degrees being more competent and gaining greater personal satisfaction from their teaching.

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The staff of the project put in many long hours of work. Their assistance made the conduct of this project an invigorating experience. Ronald A. Brown, Project Co-Director, provided considerable direction and leadership in the project. Susan F. Moore was instrumental in all areas of the project and provided valuable input in the research. Mary Jo Hogue was helpful in instrumentation, data summary and analysis, and many other areas.

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Jasper S. Lee, Project Director

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PART I

STRATEGIES USED IN RECRUITING, SELECTING, AND TRAINING PERSONS WITH NON-TEACHING PROFESSIONAL DEGREES AS TEACHERS OF VOCATIONAL EDUCATION IN AGRICULTURE/AGRIBUSINESS IN THE UNITED STATES

INTRODUCTION

Securing adequate personnel who have high levels of competence is one of the problems with which administrators of programs of vocational education in agriculture/agribusinesss have had to cope in recent years. Most general educators and the lay public are unaware that such a problem exists. The media have frequently carried news and feature stories describing the surpluses of teachers that exist. And such surpluses do exist in some areas, such as social studies and business education. On only a few occasions have the media indicated that there are areas of shortage. One example was the feature story in the September 11, 1977, Chicago Tribune, which described the situation of a shortage of vocational agriculture teachers in the State of Illinois.[1] Shortages of vocational agriculture/agribusiness teachers exist in many states in the United States. A number of efforts have been made in attempting to alleviate this problem.

The shortage, though not resolved, has been reduced in some states by recruiting persons who are not fully certifiable as teachers and preparing them to meet certification requirements. One of the sources of manpower from which such persons have been recruited is a broad group comprised of persons with non-teaching professional-level degrees in agriculture, forestry, biological science, and related areas. These people (both male and female) have college degrees

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[1]Carole A. Carmichale. "State Has Big Shortage of Agriculture Teachers," Chicago Tribune, September 11, 1977, p. 35.

(some have Masters degrees) but have not completed programs of teacher education and are not usually fully certifiable as teachers of vocational agriculture/agribusiness.

The Study

The problem investigated in this study and reported on in this document was to identify, describe, and evaluate strategies for recruiting, selecting, and training persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness and to develop a recommended procedure for such training.

The strategies used in attempting to secure an adequate supply of teachers of vocational education in agriculture/agribusiness need continual assessment. Different states have attempted to cope with the problem of teacher shortage in a variety of ways, one being the preparation of persons with professional-level degrees in agriculture, forestry, biological science, and related areas. Some of these areas have had more persons available than could be placed in the regular job market. Thus, a potential source of technically-competent personnel for vocational education in agriculture/agribusiness was available.

In order to assure correct interpretation, the term "persons with non-teaching professional degrees" has been defined as follows for this study:

> Persons who have baccalaureate degrees in agriculture, forestry, wildlife, agricultural mechanization, biological science, and related areas, but who have not met the certification requirements of the various states to be teachers of vocational education in agriculture/agribusiness.

The primary objective of the project reported on here was to develop a training procedure for preparing persons with non-teaching professional degrees to become teachers of vocational agriculture. This was accomplished through the following contributory objectives:

1. To assess through a survey of state supervisors of agricultural education in all states the extent of utilization made of persons with non-teaching professional degrees as teachers of vocational education in agriculture/agribusiness in the United States.
2. To determine through a survey of the state supervisors and head teacher educators in all states the strategies used in recruiting and selecting persons with non-teaching professional degrees as teachers of vocational education in agriculture/agribusiness.
3. To evaluate through a survey of state supervisors, head teacher educators, and a sample of persons with non-teaching professional degrees who have become teachers of vocational agriculture/agribusiness the strategies used in recruiting and selecting persons with non-teaching professional degrees as teachers of vocational education in agriculture/agribusiness.
4. To determine through a survey of state supervisors and head teacher educators the strategies used in training persons with non-teaching professional degrees as teachers of vocational education in agriculture/agribusiness.
5. To evaluate through a survey of state supervisors, head teacher educators, and a sample of persons with non-

teaching professional degrees who have become teachers of vocational agriculture/agribusiness and their immediate supervisors at the local level, the strategies used in training persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness.

6. To develop, print in quantity, and distribute a procedure for recruiting, selecting, and training persons with non-teaching professional degrees as teachers of vocational education in agriculture/agribusiness.

LITERATURE REVIEW

The literature in the field of education is filled with articles and reports on the supply of available teachers in the United States. Whether or not a shortage or surplus of teachers exists depends on who is writing and which area of education is being discussed. Craig's[1] statement that "the much publicized oversupply of teachers in education is only a half-truth" is most appropriate. Reports in the media often state that an oversupply of teachers exists, but the media fail to be specific in terms of the areas in which this is true. Thus, the general public is mislead in terms of the situation in vocational education in agriculture/agribusiness.

A shortage of teachers has existed in vocational education in agriculture/agribusiness for many years. This shortage is more than in just numbers of teachers but also in the specialized areas of the vocational agriculture/agribusiness programs, such as ornamental horticulture, forestry, agricultural supplies and services, and agricultural products. Needed expansion of programs has been handicapped by the lack of an adequate supply of teachers.

Each year a study is made to assess the national teacher supply-demand situation in vocational agriculture/agribusiness. The study is entitled "A National Study of the Supply and Demand for Teachers of

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[1]David G. Craig. A National Study of the Supply and Demand for Teachers of Vocational Agriculture (Knoxville: The University of Tennessee, March, 1978), p. 1.

Vocational Agriculture." The most recent study[2] available shows that in 1977 there were 12,694 positions for teachers of vocational agriculture at the secondary level. In that year, 221 teachers were needed but unavailable on August 1, 567 teachers had temporary or emergency certificates, and 90 high school departments of vocational agriculture did not operate in 1977-78 because of the teacher shortage. During the past 10 years, the number of teachers needed but not available on August 1 of each year has ranged from a high of 292 in 1974 to a low of 120 in 1965[3]. This shortage of teachers has resulted in departments being closed, new programs not being established, and less than fully qualified teachers assuming teaching positions.

The shortage of teachers in vocational agriculture/agribusiness has occured for several reasons. First, there has been a steady rise of approximately five percent per year of teaching positions. For example, during the 1975-76 school year 499 new positions were added[4] and during the 1976-77 school year 305 new positions were added. Second, the number of new college graduates entering teaching, although a record high during the 1976-77 school year of 1,063 was still not enough to fill the regular turn-over in vocational agriculture/agribusiness

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[2] Ibid. p. 5.

[3] Ibid. p. 8.

[4] David G. Craig. "Vocational Agriculture Teacher Shortage Continues." The Agricultural Education Magazine. Vol. 49, No. 9, March 1977, p. 204.

teaching jobs plus the newly created positions. Third, the turn-over rate of teachers of vocational agriculture/agribusiness is about ten percent annually. (It was 10.3 percent in 1977[5].) A fourth, reason for the shortage of teachers is that only 60 percent of the graduates in agricultural education enter the teaching profession.[6]

The states where a shortage of qualified teachers has existed have attempted to alleviate some of the problem through emergency and temporary certification. The State of Ohio initiated a program in 1973 to recruit and qualify for certification as teachers of vocational agriculture persons who had professional degrees in agriculture or who had seven years of practical work experience in agricultural industry (three years in the case of persons with an associate degree in agriculture). A study of the professional education competencies these individuals need was made in 1973 by Eddie A. Moore[7]. Other states, such as Iowa[8] and Arizona[9], have developed similar programs for recruitment and certification of non-professional degree persons as teachers of vocational agriculture/ agribusiness.

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[5]David G. Craig. A National Study of the Supply and Demand for Teachers of Vocational Agriculture (Knoxville: The University of Tennessee, March, 1978), p. 5.

[6]Ibid. p. 6.

[7]Eddie A. Moore. The Professional Education Competency Needs of Three Different Groups of Vocational Agriculture Teachers in Ohio. (Columbus: The Ohio State University, 1973) Ph.D. Dissertation.

[8]David L. Williams and Harold R. Crawford. A Vocational Agriculture Teachers Emergency Certification Program. (Ames: Department of Agricultural Education, Iowa State University, 1975).

[9]A Manual for Professional Preparation of Interms in Agricultural Education. (Tucson: Department of Agricultural Education, The University of Arizona, n.d.).

Thirty-four states have provisions in certification regulations for issuing emergency or temporary certificates.[10] In nearly all cases a minimum number of hours of credit in professional education courses must be earned within a period of usually three to five years. An example is the State of Mississippi, which allows five years for a provisionally certified teacher to complete 24 semester hours of study in professional education.[11] This procedure can be utilized to select and train persons with non-teaching professional degrees.

A 1973 study conducted by the University of Illinois[12] dealt with training secondary school science teachers to establish programs in applied biological and agricultural occupations. The project involved renewal of currently employed metropolitan science teachers through a series of training activities. The target population was science teachers in the metropolitan areas of Chicago and East St. Louis. The training program was deemed quite effective but the participants indicated a need for appropriate occupational technical knowledge and skills.

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[10] Floyd J. Doering. "Vocational Agriculture Survey - United States on Teacher Shortage and Supervision," paper presented at the Central States Seminar (Chicago: January, 1975), as cited by Gary E. Moore. "Recruiting Vocational Agriculture Teachers From Industry - Boon or Bane?" The Journal of the American Association of Teacher Educators in Agriculture. Volume XVII (November, 1976), p. 14.

[11] Regulations for Teacher Certification. (Jackson, Mississippi: State Department of Education, revised 1975), p. 40.

[12] Hollie B. Thomas, James E. Grant, and Everett Harris. Renewal of Currently Employed Teachers as Teachers of Applied Biological and Agricultural Occupations. (Urbana: University of Illinois, 1973).

Program expansion has been greatly reduced by the shortage of competent personnel. A project in Mississippi[13] to establish specialized career preparation programs in vocational agriculture was unable to locate fully certifiable teachers for four of nine new programs. Two positions went completely unfilled. Some of the persons meeting certification requirements did not have a high level of competence in the specialized areas.

Snowden[14] in 1971 recognized the need for developing teacher competencies in diverse job titles in agricultural industry. A program was carried out in Mississippi during the summer to develop increased teacher competencies in areas of agricultural business and industry where teachers often had low levels of competence. This program was an attempt to improve the instruction in specialized areas of the agricultural industry. It is possible that persons with high levels of technical competence, such as those with non-teaching professional degrees, could be recruited and prepared to become teachers.

Moore[15] investigated another approach for obtaining teachers of vocational agriculture/agribusiness. His study focused on the use of teachers who were recruited from industry and how they compared to teachers who

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[13] Career Preparation in Agriculture Project. Final Report. (Mississippi State: Mississippi State University, 1976).

[14] Obed L. Snowden. In-Service Development of Vocational Teachers for Competencies in Non-Farm Agricultural Occupations. Final Report. (Mississippi State: Mississippi State University, July, 1971).

[15] Gary E. Moore. "Recruiting Vocational Agriculture Teachers from Industry - Boon or Bane?" The Journal of the American Association of Teacher Educators in Agriculture. Vol. XVII, No. 3, November, 1976, p. 14.

had completed teacher education programs. He concluded that this practice would require careful consideration and that the teachers would definitely need to receive appropriate pedagogical preparation.

The National Vocational Agriculture Teachers Association in a column by the President (1978) addressed the issue of teacher shortage and emergency certification. This article contained the following statement:

> The major concern at present lies in the emergency certification of individuals by state certification boards to teach vocational agriculture without adequate training in teaching techniques and/or basic agricultural knowledge. Many of these people have had little or no relationship with the FFA and its importance to the development of students into useful citizens which is also vital to a quality local agriculture program. Many state certification boards apparently pay little attention to these qualifications when certifying individuals to teach vocational agriculture. In some states the individual receiving emergency certification need only pay a nominal fee annually and remain as a teacher indefinitely, which makes a farce of a young man or woman working for four years at a college to become fully qualified as a vocational agriculture teacher.
>
> Each state should require a maximum two-year period after emergency certification for an individual to fulfill all the requirements to become a fully qualified vocational agriculture instructor in that state. Agriculture educators at the university level should develop and offer off-campus instruction for these individuals and state supervisors and teacher associations need to conduct workshops as means to develop these individuals into effective vocational agriculture instructors and FFA advisors. [16]

The problem of teacher shortage in vocational agriculture/agribusiness is greater than statistical reports show. As earlier

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[16]"The President Speaks: Emerging Teacher Certification." News and Views of NVATA. Vol. XXI, No. 2, August, 1978, p. 1.

stated, 201 teachers were needed by unavailable on August 1, 1977, and 90 departments did not operate that year because of the teacher shortage. These statistics do not fully reveal the level of competence of those persons filling the positions. The increased specialization in curricula in vocational agriculture has brought about a need for teachers with specialized competencies. One source of such teachers is the baccalaureate graduates of colleges in specialized areas of agriculture, forestry, natural resources, and related subjects. These persons often have high technical competence but do not have professional training in education. Through providing the needed professional training they are often able to meet certification requirements.

PROCEDURE

The overall procedure followed in the conduct of the study was designed to identify, describe, and evaluate the strategies being used in recruiting, selecting, and training persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness and to develop a recommended procedure for such training.

An advisory committee was selected to advise the project staff on the conduct of the project. The committee was comprised of two state supervisors, two teacher educators, and two vocational agriculture/agribusiness teachers with non-teaching professional degrees. Members of the advisory committee were as follows:

State Supervisors	-	Elmer Cooper, Maryland
		C. M. Brewer, Mississippi
Teacher Educators	-	David McCracken, Ohio
		David Williams, Iowa
Teachers	-	Elissa Steeves, Virginia
		Edward Faurot, Mississippi

Two meetings of the advisory committee were held. The first meeting was held at Mississippi State University on September 26-27, 1977. The purpose of this meeting was to orient the advisory committee members to the project and secure their input in the conduct of the project. The members of the advisory committee offered a number of helpful suggestions on the scope of the study, population identification, sampling techniques, and instrumentation. (Appendix A presents a summary of the minutes of the first meeting of the advisory committee.)

The second meeting of the advisory committee was held in Lexington, Kentucky, on April 6-7, 1978. This site was chosen because of its central location in relation to the homes of the committee members and because several project staff and committee members would be in Lexington attending the Southern Agricultural Education Conference. This meeting focused on a report and study of the findings of the project and review of the tentative procedure for training persons with non-teaching professional degrees to be teachers of vocational agriculture/agribusiness. (Appendix B presents a summary of the minutes of the second meeting of the advisory committee.)

The procedures followed in the conduct of the study are presented here for each Contributory Objective. In some cases, procedures in the conduct of the Contributory Objectives were combined to facilitate the collection of data.

Procedure for Contributory Objective Number 1

> To assess through a survey of state supervisors of agricultural education in all states the extent of utilization made of persons with non-teaching professional degrees as teachers of vocational education in agriculture/agribusiness in the United States.

The assessment of the extent of utilization made of persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness was achieved by mailing a questionnaire to all state supervisors of vocational agriculture/agribusiness in the United States. To facilitate the portion of the study involving state supervisors, the portions of Contributory Objectives 2 and 3 involving the state supervisors were consolidated with the study of this objective.

Items on the questionnaire were designed to develop a profile of the practices in the various states on the extent of use made of persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness. The questionnaire was comprised of three main parts: (1) background information on the extent of use made of persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness in each state, (2) a Likert-type rating scale for assessing the effectiveness of recruitment and certification strategies with such teachers, and (3) a place for listing the names and complete mailing addresses of all such teachers. The questionnaire was reviewed by the advisory committee and a panel of experts to insure face and construct validity. It was designed so that the responses could be tabulated using electronic data processing. A cover letter explaining the questionnaire accompanied each questionnaire. A follow-up letter was sent to the state supervisors who had not responded in the alloted time. (Samples of the cover letter, questionnaire, and follow-up letter are presented in Appendices C, D, and E.)

The state supervisors were identified from a list of such persons, as supplied by the Education Program Specialist for Agriculture/Agribusiness in the U. S. Office of Education, Washington, D. C. The list contained the names and mailing addresses of 52 state supervisors from the states and territories.

Procedure for Contributory Objective Number 2

> To determine through a survey of state supervisors and head teacher educators in all states the strategies used in recruiting and selecting persons with non-teaching professional degrees as teachers of vocational education in agriculture/agribusiness.

The strategies used in recruiting and selecting persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness were determine through a questionnaire mailed to state supervisors and head teacher educators in all states identified as using such teachers in Contributory Objective Number 1. With the state supervisors, this objective was achieved as a part of Contributory Objective Number 1, as previously discussed.

A list of head teacher educators was obtained from the Education Program Specialist for Agriculture/Agribusiness of the U. S. Office of Education, Washington, D. C.

The questionnaire was designed to determine how persons with non-teaching professional degrees have been recruited and selected as teachers. Items on the questionnaire analyzed recruitment and selection procedures, how teaching opportunities are publicized, prospective teachers are counseled, and previous education is evaluated to determine areas of deficiency for meeting certification requirements. The roles of supervisory personnel and teacher educators in recruitment and selection were studied. The instrument was designed so that the responses could be easily tabulated using electronic data processing. A sopy of the cover letter and questionnaire sent to teacher educators is included in Appendices F and G, respectively.

Procedure for Contributory Objective Number 3

> To evaluate through a survey of state supervisors, head teacher educators, and a sample of persons with non-teaching professional degrees who have become teachers of vocational agriculture/agribusiness the strategies used in recruiting and selecting persons with non-teaching professional degrees as teachers of vocational education in agriculture/agribusiness.

The evaluation of strategies used in recruiting and selecting persons with non-teaching professional degrees was achieved by mailing a questionnaire to state supervisors and teacher educators in states where such teachers are utilized and a sample of vocational agriculture/agribusiness teachers who have non-teaching professional degrees. The list of supervisors and teacher educators to be included are those utilized in Contributory Objective Number 2. The sample of teachers was randomly selected from lists of such teachers, as supplied by the state supervisors.

The information from the state supervisors and head teacher educators to achieve this objective was obtained as a part of the survey in Contributory Objective Number 2. The responses from the teachers were obtained by using a mail-out survey form. The purpose was to assess the effectiveness of the strategies used in recruitment and selection, as identified in Contributory Objective Number 2. The responses were tabulated and analyzed using electronic data processing methods. Comparisons were made of the responses received from state supervisors, teacher educators, and teachers in order to determine if differences existed in the effectiveness of the strategies used in recruitment and selection. Statistical analyses included the establishement of fre-

quency distributions, means, standard deviations, percentages, and the use of analysis of variance and Duncan's New Multiple Range Test. A copy of the cover letter and teacher survey form are included in Appendices H and I, respectively.

Procedure for Contributory Objective Number 4

> To determine through a survey of state supervisors and head teacher educators the strategies used in training persons with non-teaching professional degrees as teachers of vocational education in agriculture/agribusiness.

The strategies used in training persons with non-teaching professional degrees were determined by means of a mail-out questionnaire. Individuals included were the state supervisors and teacher educators studied in Contributory Objective Number 2.

The survey form was designed to determine the strategies used and the effectiveness of each in training persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness. The questionnaire contained open-ended and closed items so that the respondents could include all of the training strategies they have used.

Procedure for Contributory Objective Number 5

> To evaluate through a survey of state supervisors, head teacher educators, and a sample of persons with non-teaching professional degrees who have become teachers of vocational agriculture and their immediate supervisors at the local level, the strategies used in training persons with non-teaching professional degrees as teachers of vocational education in agriculture/agribusiness.

The effectiveness of the strategies used in training persons with non-teaching professional degrees was determined using a Likert-type rating scale. Responses were obtained from state supervisors, head teacher educators, a sample of persons with non-teaching professional degrees who have become teachers of vocational agriculture, and their immediate supervisors at the local level. The names of the immediate supervisors of the teachers were identified by the teachers who were surveyed. The instrument was developed to evaluate the strategies identified in Objective Number 4. (A copy of the cover letter and instrument sent to the immediate supervisors is included in Appendices J and K, respectively.)

Procedure for Contributory Objective Number 6

> To develop, print in quantity, and distribute a procedure for recruiting, selecting, and training persons with non-teaching professional degrees as teachers of vocational education in agriculture/ agribusiness.

The development of a procedure for recruiting, selecting, and training persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness was accomplished through an analysis of findings obtained from Contributory Objective Numbers 1-5. Sample procedures were obtained from other states and used in achieving this objective. While in tentative form, the procedure was reviewed by the advisory committee and other persons, as deemed necessary, as a part of the authentication process.

The finalized procedures for recruiting, selecting, and training persons with non-teaching professional degrees are printed as Part II of this report. Two hundred copies of the suggested training procedure were printed, with one copy being mailed to each teacher education department and one to each state supervisor of vocational education in agriculture in the United States.

FINDINGS

This section includes a report of the findings of the contributory objectives as assessed through the survey instruments mailed to state supervisors, teacher educators, teachers, and the immediate supervisors of teachers in vocational agriculture/agribusiness. The data which were obtained were used to determine the extent of use and effectiveness of persons with non-teaching professional degrees as teachers of vocational agriculture/agribusinesss, and to develop a training program for such persons, which is presented as Part II of this report. In some cases, questions pertaining to several objectives were combined onto one instrument in order to facilitate the collection of data. However, for the purpose of this section, the information will be presented in terms of constributory objectives.

Contributory Objective Number 1

The extent of utilization made of persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness was determine through a mail-out survey sent to the 52 state and territorial supervisors in the United States. In order to confirm the shortage of teachers, the state supervisors were first asked if they presently had an adequate supply of professionally trained vocational agriculture/agribusiness teachers in their state. Out of the 42, or 80.8 percent, of the state supervisors who responded, 33, or 78.6 percent, said their state did not have an adequate supply of professionally trained vocational agriculture/agribusiness teachers.

Thirty states, or 71.4 percent, indicated that they presently employed a total of 1,029 non-teaching professional degree persons as vocational agriculture/agribusiness teachers. As Table 1 indicates, 17 states, or 58.3 percent, of the respondents employed twelve or less non-teaching professional degree persons, while 10 states, or 34.7 percent, employed between thirteen and fifty non-teaching professional degree persons. One state reported employing 204, while another employed 400 persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness. One state did not have records available on the number employed.

Table 1. Number and Percent of Currently Employed Non-Teaching Professional Degree Persons as Vocational Agriculture/ Agribusiness Teachers

Number of Teachers	Number of States	Percent
1-12	17	58.5
13-25	5	17.3
26-50	5	17.4
204	1	3.4
400	1	3.4

N = 29

Contributory Objective Number 2

The strategies used in recruiting and selecting persons were determined through surveys sent to state supervisors and head teacher educators of vocational agriculture/agribusiness in all states.

Sixteen, or 53.3 percent, of the state supervisors reported that persons with non-teaching professional degrees were actively recruited

in their states as teachers of vocational agriculture/agribusiness. Similar findings were obtained from the teacher educators when 33, or 55.0 percent, reported that their states actively recruited persons with non-teaching professional degrees.

As shown in Table 2, state supervisors reported that local school administrative personnel and state or district supervisory personnel were more often given the responsibility for selecting persons with non-teaching professional degrees. Teacher educators and local vocational agriculture/agribusiness teachers were used to a much lesser extent.

Table 2. Number and Percent of Persons with Primary Responsibility for Selection of Persons with Non-Teaching Professional Degrees as Teachers of Vocational Agriculture/Agribusiness

Persons Responsible for Selection	Number	Percent
Local school administrative personnel	26	86.7
State or district supervisory personnel	15	50.0
Teacher educators	6	20.0
Local teacher of vocational agriculture/ agribusiness	2	6.7

N = 30. Total of percentage column does not equal 100 percent, as some state supervisors felt several persons shared in the responsibility.

As Table 3 indicates, most state supervisors identified educational background, type of work experience, and length of work experience as criteria used in selecting persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness.

FFA experience was used moderately by states as a means of selection, but few states indicated using age, participation in professional agricultural associations, or grade point average of previous education as criteria for selecting persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness.

Table 3. Criteria Used in Selecting Persons With Non-Teaching Professional Degrees as Teachers of Vocational Agriculture/ Agribusiness

Criteria Used in Selection	Number	Percent
Educational background	28	93.3
Type of work experience	28	93.3
Length of work experience	24	80.0
FFA experience	9	30.0
Age	3	10.0
Participation in professional agricultural associations	3	10.0
Grade point average of previous education	2	6.7

N = 30. Total of percentage column does not equal 100 percent as respondents could check more than one criterion.

Contributory Objective Number 3

The strategies used in recruiting and selecting persons with non-teaching professional degrees as teachers of vocational agriculture/ agribusiness were evaluated through a survey of state supervisors, head teacher educators, and a sample of persons with non-teaching professional degrees who have become teachers of vocational agriculture/agribusiness.

The sample of persons with non-teaching professional degrees was chosen by using a list of such persons provided by 26, or 86.7 percent, of the 30 state supervisors who reported that their states employed such persons. However, the list of names and addresses supplied by the state supervisors included only 514 of the 1,029 non-teaching professional degree persons reported as being employed as vocational agriculture/agribusiness teachers. From the 514 persons, a 50 percent random, stratified sample was chosen. Two hundred and fifty-seven persons were mailed questionnaires, with a return rate of 154, or 59.9 percent. However, 32, or 20.8 percent, of the 154 who returned their questionnaires reported they did not enter teaching holding an emergency or temporary certificate. Therefore, in order to further identify the sample, certain background information was obtained on the 122 persons surveyed as non-teaching professional degree persons, as reported in the following section.

Background Information on Teachers

As Table 4 indicates, the three areas in which baccalaureate degrees were most often held by teachers with non-teaching professional degrees were horticulture, with 27, or 23.0 percent; animal science, with 24, or 20.5 percent; and other, with 24, or 20.5 percent. "Other" included such areas as medical technology, agricultural engineering technology, zoology, business administration, geology, agribusiness, soils, horse husbandry, chemistry, earth science, botany, geography, psychology, industrial arts, education, history, physical education, park administration, plant pathology,

social science, and animal health technology. Of the remaining 36.0 percent of the persons with non-teaching professional degrees, nine, or 7.7 percent, held a degree in general agriculture; nine, or 7.7 percent, were in biology; seven, or 6.0 percent, were in agronomy; six, or 5.1 percent, were in forestry; six, or 5.1 percent, were in agricultural economics; three, or 2.6 percent, were in wildlife; one, or 0.9 percent, was in agricultural mechanics; and one, or 0.9 percent, was in poultry science. No one had received a B.S. degree in dairy science or entomology.

Table 4. Primary Major on Baccalaureate Degree of Teachers With Non-Teaching Professional Degrees Who Are Teachers of Vocational Agriculture/Agribusiness

Major	Number	Percent	Major	Number	Percent
Horticulture	27	23.0	Agricultural economics	6	5.1
Animal science	24	20.5	Wildlife	3	2.6
Other	24	20.5	Agricultural mechanics	1	0.9
General agriculture	9	7.7	Poultry science	1	0.9
Biology	9	7.7	Dairy science	0	0.0
Agronomy	7	6.0	Entomology	0	0.0
Forestry	6	5.1			

N = 117

Of the 115 who responded, the majority (76, or 66.1 percent) held a baccalaureate degree; 28, or 24.3 percent, held a masters degree;

eight, or 7.7 percent, held an educational specialist degree; and three, or 2.6 percent, had a doctorate.

Table 5 indicates when the sample of persons with non-teaching professional degrees did or would be fully certified as vocational agriculture/agribusiness teachers. Most, 83, or 72.2 percent, were or would be certified between 1976 and 1979. However, between 1962 and 1969, four, or 3.5 percent, were certified and between 1970 and 1975, 32, or 19.1 percent, were certified. The remaining six, or 5.2 percent, will be certified between 1980 and 1982.

Table 5. Year Non-Teaching Professional Degree Persons Became or Will Become Certified to be Teachers of Vocational Agriculture/Agribusiness

Year Certified	Number of Individuals Certified	Year Certified	Number of Individuals Certified
1962	1	1975	7
1968	1	1976	19
1969	2	1977	19
1970	1	1978	31
1971	2	1979	14
1972	4	1980	4
1973	3	1981	1
1974	5	1982	1

N = 115

Table 6 indicates the total number of non-teaching professional degree persons teaching at least one grade in each of the eight areas of vocational agriculture/agribusiness plus those teaching basic voca-

Table 6. Areas of Vocational Agriculture/Agribusiness Taught By Persons with Non-Teaching Professional Degrees

Area of Vocational Agriculture/Agribusines	Number Teaching*	Percent Teaching*
Basic Vocational Agriculture	46	37.7
Production Agriculture	37	29.5
Horticulture	67	55.7
Agricultural Mechanics	34	29.5
Forestry	18	14.8
Renewable Natural Resources	11	9.0
Agricultural Supplies/ Services	18	14.8
Agricultural Products, Processing and Marketing	18	14.8
**Other	21	16.4

N = 122
*N does not equal 122, nor does the percent equal 100, since some teachers taught more than one area.
**Other includes: Farm management, zoo science, large and small animal care, citrus production, botany, building construction, horse husbandry, mechanical drawing, agriculture and landscape engineering, grain marketing, economics, fisheries and marine management.

tional agriculture/agribusiness. Over half, 67, or 55.7 percent, teach horticulture and over one third, 46, or 37.7 percent, teach basic vocational agriculture/agribusiness. Renewable natural resources is taught by the fewest individuals, 11, or 9.0 percent.

Table 7 presents the areas of vocational agriculture/agribusiness and the grade levels taught by the persons with non-teaching professional degrees. Most respondents taught the upper grades of vocational

Table 7. Areas and Grade Levels of Vocational Agriculture/Agribusiness Taught by Persons with Non-Teaching Professional Degrees

Area of Vocational Agriculture/ Agribusiness	Grade Levels						
	7th	8th	9th	10th	11th	12th	Adult
Basic Vo-Ag	2	7	34	28	18	18	4
Production Agriculture	0	2	17	28	25	25	3
Horticulture	2	3	21	38	57	52	20
Agricultural Mechanics	1	1	8	19	29	24	6
Forestry	0	3	1	4	11	13	1
Renewable Natural Resources	0	1	1	6	11	9	0
Agricultural Supplies/Services	0	1	4	7	12	15	0
Agricultural Products, Processing, Marketing	0	0	6	9	12	13	2
**Other	1	1	4	8	13	15	11
*Total	6	19	96	147	188	184	47

N = 22

*Total does not equal 122 since some teachers taught more than one grade level. However, the totals can be looked at in a relative manner.

**Other includes: Farm management, zoo science, large and small animal care, citrus production, botany, building construction, horse husbandry, mechanical drawing, agriculture and landscape engineering, grain marketing, economics, fisheries and marine management.

agriculture/agribusiness. Few taught grades seven or eight and not many taught adult courses.

The majority (93, or 78.8 percent) of the teachers surveyed had taught from one to four years; 22, or 19.5 percent had taught between five and eight years; and three, or 4.2 percent, had taught between nine and eleven years. One person with a non-teaching professional degree had taught for 14 years and one for 24 years. The findings are reported in Table 8.

Table 8. Number of Years Persons with Non-Teaching Professional Degrees Have Taught Vocational Agriculture/Agribusiness

Number of Years	Number of Teachers	Number of Years	Number of Teachers
1	27	8	6
2	21	9	1
3	26	10	1
4	19	11	1
5	8	14	1
6	3	24	1
7	3		

N = 118

Of the 120 persons with non-teaching professional degrees who responded, 51, or 42.5 percent, were enrolled in vocational agriculture/agribusiness while in high school. Of those who took vocational agriculture, one half (26, or 51.0 percent) were enrolled for four or more years; eight, or 15.7 percent, for three years; 12, or 25.5 percent, for two years; and four, or 7.8 percent, for one year.

Forty-eight, or 40.3 percent, of the 119 persons with non-teaching professional degrees were FFA members when in high school. Over half, 26, or 54.2 percent, of those enrolled in the FFA were members for four or more years; seven, or 14.6 percent, were members for three years; 12, or 25.0 percent, for two years; and three, or 6.3 percent, were FFA members for one year.

The findings concerning past work experience of non-teaching professional degree persons are presented in two tables, Tables 9 and 10. Table 9 shows the type of past work experience of the respondents. It was found that 65, or 53.3 percent had work experience in agriculture; 17, or 13.9 percent, had work experience in non-agriculture areas; and 35, or 28.7 percent, had a combination of both agriculture and non-agriculture work experience. Five (4.1 percent) did not respond to the question.

Table 9. Number and Percent of Persons Employed By the Type of Work Experience of Persons with Non-Teaching Professional Degrees Who Are Teachers of Vocational Agriculture/Agribusiness

Type of Work Experience	Number	Percent of Total Employed
Agriculture	65	53.3
Non-agriculture	17	13.9
Combination of agriculture and non-agriculture	35	28.7
Non-respondents	5	4.1

N = 122

Table 10 summarizes the agriculture work experience in the eight occupational areas and the non-agriculture experience. The largest

category of persons, 50 or 40.9 percent, had past work experience in the non-agriculture category. Of those who had past work experience in agriculture, the largest areas represented were production agriculture (39 or 31.9 percent), horticulture (37 or 30.3 percent), and other agriculture (25 or 20.4 percent). The number of years of work experience other than teaching agriculture ranged from one to

Table 10. Type of Work Experience of Persons with Non-Teaching Professional Degrees Who are Teaching Vocational Agriculture/Agribusiness.

Type of Work Experience	Number	Percent of Total Employed*	Mean Number of Years	Standard Deviation
Non-agriculture	50	40.9	6.34	6.54
Production agriculture	39	31.9	7.97	5.36
Horticulture	37	30.3	5.97	4.61
Other agriculture	25	20.4	4.20	4.53
Agricultural products, processing, and marketing	8	6.5	5.62	4.90
Agricultural supplies and services	6	4.9	2.33	2.16
Forestry	5	4.0	2.80	2.95
Renewable natural resources	2	1.6	12.50	10.61
Agricultural mechanics	2	1.6	1.00	0.00

*Percent does not equal 100 in that respondents may have working experience in more than one area; however, the percent may be looked at in a relative sense, to determine major emphasis.

thirty-five. The means and standard deviations of the number of years of work experience in each of the areas are presented in Table 10.

The evaluation of strategies used in recruiting and selecting persons with non-teaching professional degrees was determined by using a four-point Likert-type scale. The respondents could also indicate if they did not use a given technique. The responses of those individuals who did not use a technique were not used in determining the frequencies, means, and standard deviations on the effectiveness of the techniques. Table 11 reports the findings of the effectivenesss of various professional persons in recruiting teachers with non-teaching professional degrees as rated by state supervisors, teacher educators, and teachers with non-teaching professional degrees presently teaching vocational agriculture/agribusiness. State supervisors and teacher educators felt that local school administrators were more effective in recruiting teachers with non-teaching professional degrees, while the teachers themselves felt that other vocational agriculture/agribusiness teachers were more effective. The state supervisors and teacher educators felt the opposite on the least effective persons in recruitment of teachers with non-teaching professional degrees. They felt that vocational agriculture/agribusiness teachers were the least effective, while teachers with non-teaching professional degrees felt that local school administrators were the least effective. All three groups felt that state or district supervisors, teacher educators, local school administrators, and vocational agriculture/agribusiness teachers were effective, at least to some extent. However, state supervisors rated vocational agriculture/agribusiness teachers as less effective in recruiting.

Table 11. Effectiveness of Persons Used in Recruiting Teachers With Non-Teaching Professional Degrees as Rated by State Supervisors, Teacher Educators, and Teachers with Non-Teaching Professional Degrees

Persons Used In Recruitment	State Supervisors			Teacher Educators			Teachers With Non-Teaching Professional Degrees		
	N	Mean*	Standard Deviation	N	Mean*	Standard Deviation	N	Mean*	Standard Deviation
State or district supervisors	25	2.36	.64	35	2.26	.61	42	2.50	1.07
Teacher educators	22	2.23	.61	39	2.46	.72	66	2.61	1.07
Local school administrators	28	2.54	.84	38	2.50	.95	73	2.49	1.14
Vocational agriculture/agri-business teachers	23	1.87	.69	38	2.18	.69	69	2.94	.98

**Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

These findings are further emphasized in Tables 12 through 15 where the analysis of variance is presented for each of the four variables. Table 15 shows that there is a significant difference at the .05 level between the findings of the three respondents and their ratings of the effectiveness of vocational agriculture/agribusiness teachers in recruiting teachers with non-teaching professional degrees. The Duncan's New Multiple Range Test was used to determine where the difference lay. Table 16 reports the findings of this test.

Table 12. Analysis of Variance for the Effectiveness of State or District Supervisors in Recruiting Persons Who Have Non-Teaching Professional Degrees by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$**	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	42	2.50	1.07	.16	Between	2	1.14	.57	.82*
State Supervisors	25	2.36	.64	.13					
Teacher Educators	35	2.26	.61	.10	Within	99	68.95	.70	
Total	102	2.38	.83	.08	Total	101	70.09		

* P < .05, F = 3.00 or higher

**Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 13. Analysis of Variance for the Effectiveness of Teacher Educators in Recruiting Persons Who Have Non-Teaching Professional Degrees by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$**	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	66	2.61	1.07	.13					
					Between	2	2.43	1.22	1.49*
State Supervisors	22	2.23	.61	.13					
					Within	124	101.31	.82	
Teacher Educators	39	2.46	.72	.12					
Total	127	2.50	.91	.08	Total	126	103.75		

* P < .05, F = 3.00 or higher

**Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 14. Analysis of Variance for the Effectiveness of Local School Administrators in Recruiting Persons Who Have Non-Teaching Professional Degrees by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$**	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	73	2.49	1.14	.13					
					Between	2	.04	.02	.02*
State Supervisors	28	2.54	.84	.16					
					Within	136	146.71	1.08	
Teacher Educators	38	2.50	.95	.15					
Total	139	2.50	1.03	.09	Total	138	146.75		

* $P < .05$, $F = 3.00$ or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 15. Analysis of Variance for the Effectiveness of Vocational Agriculture/Agribusiness Teachers Who Have Non-Teaching Professional Degrees in Recruiting by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$ **	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	69	2.94	.98	.12					
State Supervisors	23	1.87	.69	.14	Between	2	26.29	13.14	17.74*
Teacher Educators	38	2.18	.69	.11	Within	127	94.09	.74	
Total	130	2.53	.97	.08	Total	129	120.38		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 16. Duncan's New Multiple Range Test for the Effectiveness of Vocational Agriculture/Agribusiness Teachers Who Have Non-Teaching Professional Degrees in Recruiting by Occupational Title of Respondents

OCCUPATIONAL TITLE	RANKED MEANS**	GROUP N	RELATIONSHIPS (P = .05)*
Teachers	2.94	69	
Teacher Educators	2.18	38	A
State Supervisors	1.87	23	A

* Means not followed by a common letter differ significantly from one another. A blank space opposite a mean indicates only one mean in the subset.

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

The effectiveness of the techniques used in the recruitment of non-teaching professional degree persons as rated by state supervisors, teacher educators, and teachers with non-teaching professional degrees is presented in Table 17. All three groups of respondents rated individual contact to be the most effective technique used in recruitment. This technique was rated, on the average, as somewhat effective to effective. All three groups had a different technique as being the least effective. State supervisors rated exhibits at conventions, fairs, shows, etc., to be the least effective technique in recruitment of non-teaching professional degrees, while teacher educators rated professional recruitment committees as the least effective. The use of media was rated the least effective recruitment technique by the persons with non-teaching professional degrees.

Tables 18 through 23 and Tables 25 and 26 present the analyses of variance for the effectiveness of techniques used in the recruitment of persons with non-teaching professional degrees. Only one technique, that of media, was significant at the .05 level. Table 24 shows the results of the Duncan's New Multiple Range Test. The difference lies between the opinions of teachers and teacher educators, and between teachers and state supervisors.

Table 17. Effectiveness of Techniques Used in Recruitment of Non-Teaching Professional Degree Persons as Rated by Teacher Educators, State Supervisors, and Teachers with Non-Teaching Professional Degrees

Techniques Used in Recruitment	Teacher Educators			State Supervisors			Teachers With Non-Teaching Professional Degrees		
	N	Mean*	SD	N	Mean*	SD	N	Mean*	SD
Presentations made to agricultural groups	15	1.73	.59	18	1.89	.58	38	1.84	1.00
Printed materials	18	1.83	.51	22	2.27	.70	36	1.83	.89
Media	16	2.38	.89	20	2.35	.93	35	1.57	.74
Exhibits at conventions, fairs, shows, etc.	14	1.71	.47	19	1.95	.52	52	2.14	.89
Provisions by an institution for readily accepting transfer work in education	16	2.38	.72	37	2.70	.81	66	2.55	1.06
Flexibility in obtaining masters degree work while qualifying to teach vocational agriculture	25	2.20	.91	31	2.77	.76	58	2.59	1.08
Individual contact	29	2.93	.53	40	2.90	.71	89	2.87	1.00
Professional recruitment committees	17	2.00	.61	21	1.86	.85	33	1.88	.93

*Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 18. Analysis of Variance for the Effectiveness of Presentations Made to Agricultural Groups, Such as Association Meetings, Young Farmer Groups, Adult Classes, etc. as Recruitment Techniques by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$**	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	38	1.84	1.00	.16					
					Between	2	.21	.10	.15*
State Supervisors	15	1.73	.59	.15					
					Within	68	47.76	.70	
Teacher Educators	18	1.89	.58	.14					
Total	71	1.83	.83	.10	Total	70	47.97		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 19. Analysis of Variance for the Effectiveness of Printed Materials, Such as Brochures, Flyers, and Pamphlets,as Recruitment Techniques by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$ **	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	36	1.83	.88	.15					
State Supervisors	18	1.83	.51	.12	Between	2	3.02	1.51	2.63*
Teacher Educators	22	2.27	.70	.15	Within	73	41.86	.57	
Total	76	1.96	.77	.09	Total	75	44.88		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 20. Analysis of Variance for the Effectiveness of Media (Television, Radio, and Newspapers) as Recruitment Techniques by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$ **	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	35	1.57	.74	.12					
					Between	2	11.07	5.54	8.03*
State Supervisors	16	2.38	.89	.22					
Teacher Educators	20	2.35	.93	.21	Within	68	46.87	.69	
Total	71	1.97	.91	.11	Total	70	57.94		

* P < .05, F = 3.00 or higher

**Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 21. Duncan's New Multiple Range Test for the Effectiveness of Media (Television, Radio, and Newspapers) as Recruitment Techniques by Occupational Title of Respondents

OCCUPATIONAL TITLE	RANKED MEANS**	GROUP N	RELATIONSHIPS (P = .05)*
State Supervisors	2.38	16	A
Teacher Educators	2.35	20	A
Teachers	1.57	35	

* Means not followed by a common letter differ significantly from one another. A blank space opposite a mean indicates only one mean in the subset.

**Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 22. Analysis of Variance for the Effectiveness of Exhibits at Conventions, Fairs, Shows, etc., as Recruitment Techniques by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$**	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	52	2.13	.89	.12					
					Between	2	2.09	1.05	1.79*
State Supervisors	14	1.71	.47	.13					
					Within	82	47.86	.58	
Teacher Educators	19	1.95	.52	.12					
Total	85	2.02	.77	.08	Total	84	49.95		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 23. Analysis of Variance for the Effectiveness of Provisions by an Institution for Readily Accepting Transfer Work in Education as a Recruitment Technique by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$ **	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	66	2.55	1.06	.13					
					Between	2	1.30	.65	.73*
State Supervisors	16	2.38	.72	.18					
Teacher Educators	37	2.70	.81	.13	Within	116	103.84	.90	
Total	119	2.57	.94	.09	Total	118	105.14		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 24. Analysis of Variance for the Effectiveness of Flexibility in Obtaining Masters Degree Credit While Qualifying to Teach Vocational Agriculture as a Recruitment Technique by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$ **	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	58	2.59	1.08	.14					
					Between	2	4.70	2.35	2.52*
State Supervisors	25	2.20	.91	.18					
					Within	111	103.49	.93	
Teacher Educators	31	2.77	.76	.14					
Total	114	2.55	.98	.09	Total	113	108.18		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 25. Analysis of Variance for the Effectiveness of Individual Contact as a Recruitment Technique by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$**	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	89	2.87	1.00	.11					
State Supervisors	29	2.93	.53	.10	Between	2	.11	.05	.07*
Teacher Educators	40	2.90	.71	.11	Within	155	115.84	.75	
Total	158	2.89	.86	.07	Total	157	115.95		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 26. Anaylsis of Variance for the Effectiveness of Professional Recruitment Committees as a Recruitment Technique by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$**	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	33	1.88	.93	.16					
					Between	2	.22	.11	.16*
State Supervisors	17	2.00	.61	.15					
Teacher Educators	21	1.86	.85	.19	Within	68	48.09	.71	
Total	71	1.90	.83	.10	Total	70	48.31		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Contributory Objective Number 4

The strategies used in training persons with non-teaching professional degrees as teachers of vocational education in agriculture were determined through a survey of state supervisors and head teacher educators. This objective was accomplished by asking state supervisors what their state certification requirements were for teachers with non-teaching professional degrees and what strategies were used in their states to prepare persons with non-teaching professional degrees to meet certification requirements as teachers of vocational agriculture/agribusiness. The certification requirements and the training plans varied greatly from state to state; however, some similar classifications can be made. Approximately 14 out of 42, or 33.3 percent, required occupational experience, of which the average was 1.8 years. Thirteen, or 31.0 percent, required professional education courses to be taken either before teaching or within the first several years. At least five states, or 11.9 percent, had a specialized program for persons with non-teaching professional degrees. The state supervisors reported four general strategies used to train non-teaching professional degree persons. Inservice training was used by 12, or 28.6 percent, of the 42 states which responded; seven, or 16.7 percent, used preservice training; six, or 14.3 percent, used visits by teacher educators; and 13 state supervisors, or 31.0 percent, said that persons with non-teaching professional degrees must enroll in the regular teacher education program in order to be certified.

Similar findings were obtained from teacher educators. Forty-three, or 71.7 percent, reported that their department had a program to prepare persons with non-teaching professional degrees to become

teachers of vocational agriculture/agribusiness. The programs described were similar to the training plans indicated by state supervisors. The findings show that the teacher educators who have programs for training persons with non-teaching professional degrees felt that their program was effective to some extent. Table 27 shows that 21, or 51.2 percent, of the teacher educators rated their program as effective, while 11, or 26.8 percent, rated their program as somewhat effective, and nine, or 22.0 percent, rated it as very effective.

Table 27. Effectiveness of Programs in Preparing Persons With Non-Teaching Professional Degrees to Be Teachers of Vocational Agriculture/Agribusiness as Rated by Teacher Educators

Rating Scale	Number	Percent
Not effective	0	0.0
Somewhat effective	11	26.8
Effective	21	51.2
Very effective	9	22.0

N = 41

Table 28 shows the number of persons with non-teaching professional degrees who have completed programs to become teachers of vocational agriculture/agribusiness in the last five years. Most teacher educators, 21, or 48.8 percent, reported that between 0 and 15 individuals had gone through their program in the last five years; however, ten institutions, or 23.3 percent, reported 16-30 persons had completed their program and nine institutions, or 20.9 percent, reported that 45 or more had completed their program.

Table 28. Number and Percent of Persons With Non-Teaching Professional Degrees Who Have Gone Through Programs to Become Teachers of Vocational Agriculture/Agribusiness in the Last Five Years, by Teacher Education Department

Number of Persons to Go Through Program	Number of Teacher Educators	Percent
0-15	21	48.8
16-30	10	23.3
31-45	3	7.0
45 or more	9	20.9

This objective was also accomplished by using a five-point Likert-type rating scale, of which the first part of the rating scale asked whether the listed strategies were used or not by the respondents. Table 29 reports the findings. As seen in this table, state superviosrs and teacher educators used individualized learning materials the least, whereas vocational agriculture/agribusiness teachers with non-teaching professional degrees felt that giving credit for post-secondary vocational technical education was used the least in training non-teaching professional degree persons to become vocational agriculture/agribusiness teachers. Credit graduate-level college ee programs were used most by state supervisors. Teacher educators felt that credit undergraduate-level college programs were used most. The teachers felt that acceptance of occupational experience was used by more states in training non-teaching porfessional degree persons to become vocational agriculture/agribusiness teachers.

Table 29. The Use of Training Strategies as Rated by State Supervisors, Teacher Educators, and Teachers in Training Non-Teaching Professional Degree Individuals to Become Teachers of Vocational Agriculture/Agribusiness

Training Strategy	State Supervisors		Teacher Educators		Teachers	
	N	Percent*	N	Percent*	N	Percent*
Accepting occupational experience	28	85.7	43	62.8	114	93.0
Non-credit inservice programs	28	82.1	43	53.5	112	71.4
Credit graduate-level college programs	29	93.1	43	83.7	111	78.4
Individualized learning materials	27	55.6	42	52.4	110	71.8
Credit undergraduate-level college programs	29	86.2	42	85.7	112	82.1
Giving credit for post-secondary vocational technical education	28	71.4	43	53.5	107	55.1

*Percent represents the percentage of those that use the training strategy.

Contributory Objective Number 5

The evaluation of the strategies used in training persons with non-teaching professional degrees as teachers of vocational education in agriculture/agribusiness was determined through a survey sent to state supervisors, head teacher educators, a sample of persons with non-teaching professional degrees who have become teachers of vocational agriculture and their immediate supervisors at the local level. This objective was achieved by using a five-point Likert-type rating scale. Table 30 describes the findings of the effectiveness of the strategies used in training persons with non-teaching professional degrees. Practically all of the strategies were rated as being somewhat effective with the means ranging from 1.93 to 3.09; however, state supervisors rate individualized learning materials as being the least effective strategy, while teachers rated accepting occupational experience as the most effective strategy used in training persons. As pointed out in the Analysis of Variance Tables (31, 33-37), only one training strategy was significant at the .05 level. The strategy which the three groups of respondents felt differently about was accepting occupational experience as a means of training individuals as teachers of vocational agriculture/agribusiness. Teachers and state supervisors agreed and state supervisors and teacher educators agreed, but teachers and teacher educators did not agree as to the effectiveness of accepting occupational experience as a means of certifying individuals as teachers of vocational agriculture/agribusiness. Table 32 points out this difference in the results of Duncan's New Multiple Range Test.

Table 30. Effectiveness of Strategies Used in Certifying Individuals as Teachers of Vocational Agriculture/Agribusiness As Rated by State Supervisors, Teacher Educators, and Teachers With Non-Teaching Professional Degrees

Training Strategy	State Supervisors			Teacher Educators			Teachers		
	N	Mean*	SD**	N	Mean*	SD**	N	Mean*	SD**
Accepting occupational experience	24	2.79	.72	27	2.63	.74	106	3.08	.95
Non-credit inservice programs	23	2.48	.67	23	2.17	.83	80	2.45	1.02
Credit graduate-level college programs	27	2.63	.74	36	2.78	.68	87	2.87	.94
Individualized learning materials	15	1.93	.70	22	2.18	.73	79	2.48	1.04
Credit undergraduate-level college programs	25	2.76	.83	36	2.92	.73	92	2.77	.97
Giving credit for post-secondary vocational technical education	20	2.25	.72	23	2.35	.78	59	2.44	1.04

* Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

** SD = standard deviation

Table 31. Analysis of Variance for the Effectiveness of Accepting Occupational Experience as a Strategy in Certifying Individuals as Teachers of Vocational Agriculture/Agribusiness by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$**	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	106	3.08	.95	.09	Between	2	5.28	2.64	3.37*
State Supervisors	24	2.79	.72	.15					
Teacher Educators	27	2.63	.74	.14	Within	154	120.49	.78	
Total	157	2.96	.90	.07	Total	156	125.77		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 32. Duncan's New Multiple Range Test for the Effectiveness of Accepting Occupational Experience as a Stragegy in Certifying Individuals as Teachers of Vocational Agriculture/Agribusiness by Occupational Title of Respondents

OCCUPATIONAL TITLE	RANKED MEANS **	GROUP N	RELATIONSHIPS (P = .05)*
Teachers	3.08	106	A
State Supervisors	2.79	24	AB
Teacher Educators	2.63	27	B

* Means not followed by a common letter differ significantly from one another. A blank space opposite a mean indicates only one mean in the subset.

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 33. Analysis of Variance for the Effectiveness of Non-Credit Inservice Programs (Workshops, Conferences, etc.) as a Strategy in Certifying Individuals as Teachers of Vocational Agriculture/Agribusiness by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$**	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	80	2.45	1.02	.11	Between	2	1.51	.76	.87*
State Supervisors	23	2.48	.67	.14					
Teacher Educators	23	2.17	.83	.17	Within	123	106.84	.87	
Total	126	2.40	.93	.08	Total	125	108.36		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 34. Analysis of Variance for the Effectiveness of Credit Graduate-Level College Programs as a Strategy in Certifying Individuals as Teachers of Vocational Agriculture/ Agribusiness by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$ **	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	87	2.87	.94	.10	Between	2	1.27	.63	.88*
State Supervisors	27	2.63	.74	.14					
Teacher Educators	36	2.78	.68	.11	Within	147	106.13	.72	
Total	150	2.81	.85	.07	Total	149	107.39		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 35. Analysis of Variance for the Effectiveness of Individualized Learning Materials as a Strategy in Certifying Individuals as Teachers of Vocational Agriculture/Agribusiness by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$ **	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	79	2.48	1.04	.12	Between	2	4.58	2.29	2.54*
State Supervisors	15	1.93	.70	.18					
Teacher Educators	22	2.18	.73	.16	Within	113	101.93	.90	
Total	116	2.35	.96	.09	Total	115	106.51		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 36. Analysis of Variance for the Effectiveness of Credit Undergraduate-Level College Programs as a Strategy in Certifying Individuals as Teachers of Vocational Agriculture/Agribusiness by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$ **	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	92	2.77	.97	.10	Between	2	.60	.30	.37*
State Supervisors	25	2.76	.83	.17					
Teacher Educators	36	2.92	.73	.12	Within	150	121.52	.81	
Total	153	2.80	.90	.07	Total	152	122.12		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Table 37. Analysis of Variance for the Effectiveness of Giving Credit for Post-Secondary Vocational Technical Education as a Strategy in Certifying Individuals as Teachers of Vocational Agriculture/Agribusiness by Occupational Title of Respondents

OCCUPATIONAL TITLE OF RESPONDENTS	N	$\bar{X}$**	S	SE	ANOVA SUMMARY				
					SOURCE	df	SS	MS	F RATIO
Teachers	59	2.44	1.04	.14	Between	2	.58	.29	.34*
State Supervisors	20	2.25	.72	.16					
Teacher Educators	23	2.35	.78	.16	Within	99	85.51	.86	
Total	102	2.38	.92	.09	Total	101	86.09		

* P < .05, F = 3.00 or higher

** Means are based on a rating scale of 1 = not effective, 2 = somewhat effective, 3 = effective, and 4 = very effective.

Immediate supervisors were asked to rate the effectiveness of similar strategies in preparing individuals as teachers of vocational agriculture/agribusiness. A return rate of 70.6 percent was achieved, with 77 out of the 109 surveys sent to immediate supervisors being returned. Table 38 shows that all of the strategies listed were somewhat effective, although having the teacher under the direction of an experienced teacher was rated as the most effective strategy listed. Supervision by a teacher educator from a nearby university was rated statistically lower than the others.

Table 38. Effectiveness in Preparing Individuals as Teachers of Vocational Agriculture/Agribusiness as Rated by Immediate Supervisors

Training Strategy	N	Mean	Standard Deviation
Having the teacher under the direction of an experienced teacher	54	2.98	.79
Non-credit inservice programs (workshops, conferences, etc.)	70	2.50	.79
Graduate-level college study	69	2.62	.81
Undergraduate-level college study	69	2.62	.79
Individualized learning materials	63	2.44	.93
Supervision by personnel from the state education agency	71	2.35	.91
Supervision by a teacher educator from a nearby university	54	2.32	.91

Immediate supervisors were also asked how inclined they would be to hire another person to teach vocational agriculture/agribusiness with a non-teaching professional degree. Fifty percent, or 37 out of 74, indicated they were somewhat inclined to hire another non-teaching professional degree person, while seven, or 23.0 percent, reported they would not hire another one and 20, or 27.0 percent, said they were very much inclined to hire another vocational agriculture/agribusiness teacher with a non-teaching professional degree.

Table 39 reports the areas that immediate supervisors felt that vocational agriculture/agribusiness teachers with non-teaching professional degrees lacked most in their training. The area of methods and techniques of teaching was rated by most as having been lacking in their training, followed by developing lesson plans and classroom management. The area of knowledge of subject matter and technical skills was cited as being what the largest percentage of persons with non-teaching professional degrees did not lack in their training.

Table 40 describes the use of certain persons and techniques in recruiting vocational agriculture/agribusiness teachers with non-teaching professional degrees. Individual contact was used most by all three groups of respondents--state supervisors, teacher educators, and teachers--as a recruitment technique. State supervisors and teachers felt that local school administrators were used more often in recruitment of non-teaching professional degree persons, while teacher educators thought themselves more often used in recruitment. Teachers reported that professional recruitment committees were used

Table 39. Areas of Training Lacked Most by Teachers with Non-Teaching Professional Degrees Who Are Teaching Vocational Agriculture/ Agribusiness as Rated by Immediate Supervisors

Area	N	Percent		Mean
		Yes	No	
Knowledge of FFA	71	49.3	50.7	1.51
Methods and techniques of teaching	75	72.0	28.0	1.28
Knowledge of sugject matter and technical skills	75	13.3	86.7	1.87
Establishing and using public relations	75	29.3	70.7	1.71
Planning summer programs	75	26.7	73.3	1.73
Developing lesson plans	75	61.3	38.7	1.39
Classroom management, including discipline	75	52.0	48.0	1.48
Laboratory management, including discipline	75	37.3	62.7	1.63
Knowledge of supervised occupational experience programs	75	38.7	61.3	1.61
Knowledge of adult programs	75	28.0	72.0	1.72
Organizing advisory committees	75	41.3	58.7	1.59

very little in recruiting persons such as themselves to be vocational agriculture/agribusiness teachers.

Table 40. The Use Made of Selected Individuals and Techniques in Recruiting Persons With Non-Teaching Professional Degrees to Become Teachers of Vocational Agriculture/Agribusiness as Rated by State Supervisors, Teacher Educators, and Teachers

Individuals and Techniques Used in Recruitment	State Supervisors		Teacher Educators		Teachers	
	N	Percent*	N	Percent*	N	Percent*
State or district supervisors	29	86.2	43	81.4	108	38.9
Teacher educators	28	78.6	43	90.7	108	61.1
Local school administrators	29	96.6	43	88.4	110	66.4
Vocational agriculture/agribusiness teachers	27	85.2	43	88.4	112	61.6
Presentations made to agricultural groups	28	53.6	43	41.9	111	34.2
Printed materials	28	64.3	43	51.2	112	32.1
Media	28	57.1	43	46.5	111	31.5
Exhibits at conventions, fairs, shows, etc.	27	51.8	43	44.2	113	46.0
Provisions by an institution for readily accepting transfer work in education	28	57.1	42	88.1	113	58.4
Flexibility in obtaining masters degree work while qualifying to teach vocational agriculture	29	86.2	43	72.1	110	52.7
Individual contact	29	100.0	43	93.0	113	78.8
Professional recruitment committees	28	60.7	43	48.8	111	29.7

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

One of the major problems in vocational education in agriculture/agribusiness has been an inadequate supply of qualified teachers. Shortages of teachers have existed in several states. This shortage is more than in just numbers of teachers. It is also in the specialized areas of vocational education in agriculture/agribusiness, such as horticulture, forestry, agricultural supplies and services, and agricultural products. This study focused upon the use of persons with non-teaching professional degrees as teachers of vocational education in agriculture/agribusiness in the United States.

Summary of Findings

The findings of the study are briefly summarized as follows:

1. Seventy-nine percent of the states reported having an inadequate supply of professionally trained teachers of vocational agriculture/agribusiness. Over 1,000 teachers with non-teaching professional degrees are employed in the United States.
2. The teachers with non-teaching professional degrees have been selected primarily on the basis of their educational background and type and length of work experience.
3. Even though a variety of recruitment strategies are used to secure teachers with non-teaching professional degrees, the most effective strategy was found to be individual contact.
4. Programs for training persons who have non-teaching professional degrees were found to exist in most states which use such persons as teachers. The major training strategies used

in these programs are inservice courses, preservice courses, and visits by teacher educators. About one-third of the states require these individuals to complete the traditional teacher education program.

5. Accepting occupational experience and enrolling in undergraduate and graduate courses were rated as the most effective training strategies for teachers with non-teaching professional degrees. Having the teacher under the direct supervision of an experienced teacher was rated as most effective by the immediate supervisors of persons with non-teaching professional degrees.
6. The major weaknesses of teachers with non-teaching professional degrees were found to be in the areas of methods and techniques of teaching, developing lesson plans, classroom management, knowledge of FFA and SOEP, organizing advisory committees, laboratory management, and knowledge of adult programs.

Conclusions

The following conclusions are offered on the basis of this study:

1. Persons with non-teaching professional degrees are widely employed as teachers of vocational agriculture/agribusiness.
2. Programs for training persons with non-teaching professional degrees are useful in preparing such persons to be teachers of vocational agriculture/agribusiness.
3. On the basis of ratings by their immediate supervisors, teachers with non-teaching professional degrees need to be trained in the areas of methods and techniques of teaching, how to develop lesson plans, how to manage classrooms and laboratories, how

to conduct FFA and supervised occupational experience programs, how to use advisory committees, and how to organize and carry out adult programs.

4. Everyone involved with vocational agriculture/agribusiness programs has a role in recruitment, with personal contacts being the most effective recruitment technique.
5. The ultimate responsibility for the selection of a person with a non-teaching professional degree to be a teacher of vocational agriculture/agribusiness belongs to the school administrator, but the members of supervisory staff and teachers educators have a responsibility to provide input relative to the qualifications needed by such persons.
6. An individualized plan to prepare persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness should be developed based on the competencies they currently have and the competencies needed for the conduct of an effective program.
7. The plans for training persons with non-teaching professional degrees should be flexible and include input from supervisory personnel, local school administrators, teacher educators, and other teachers of vocational agriculture/agribusiness.

Recommendations

The following recommendations are offered on the basis of the findings of this study:

1. It is recommended that persons with non-teaching professional degrees continue to be employed as teachers of vocational agriculture/agribusiness until an adequate supply of professionally-trained teachers is available. Recruitment will

involve input from all persons associated with vocational agriculture/agribusiness as administrators, supervisors, teachers, and teacher educators.

2. It is recommended that persons with non-teaching professional degrees who are employed to teach vocational agriculture/agribusiness be carefully selected on the basis of their technical competency and potential as teachers.
3. It is recommended that all persons with non-teaching professional degrees who are employed as teachers of vocational agriculture/agribusiness be enrolled in an individualized program to prepare them to be teachers. This will involve assessing the competencies they currently possess and developing the additional competencies needed to perform as teachers.
4. It is recommended that all vocational education in agriculture/agribusiness supervisors, administrators, teachers, and teacher educators study and, to the extent practical, implement the content of Part II of this Report, "Procedures for Recruiting, Selecting, and Preparing Persons With Non-Teaching Professional Degrees to be Teachers of Vocational Agriculture/Agribusiness." This Part contains a synthesis of the findings of this study and practical suggestions useful to those persons responsible for vocational agriculture/agribusiness.

PART II

PROCEDURES FOR RECRUITING, SELECTING AND PREPARING PERSONS WITH NON-TEACHING PROFESSIONAL DEGREES TO BE TEACHERS OF VOCATIONAL AGRICULTURE/AGRIBUSINESS

INTRODUCTION

The purpose of Part II is to present a statement of the procedures found to be effective in recruiting, selecting, and training persons with non-teaching professional degrees as teachers of vocational education in agriculture/agribusiness. The procedures included are those which were found to be effective in the research reported on in Part I.

The procedures which are included have a research base and have been tempered with the practical judgement of experienced vocational educators in agriculture/agribusiness. It is felt that the manner in which the project was conducted insures that the procedures are authentic. In addition to the research base, the authentication process involved considerable input from the advisory committee; in-depth study, analysis, and development by consultants; careful review by members of the faculty in the Department of Agricultural and Extension Education, Mississippi State University; and analysis of teacher education programs and credentialing practices in many states in the United States.

The procedures printed here for recruiting, selecting, and training persons with non-teaching professional degrees are intended as aids to supervisors, administrators, and teacher educators who have the responsibility for providing quality

programs in vocational education in agriculture/agribusiness. The procedures have been developed so that those which are most practical in a given situtation can be used. It is unlikely that all of the procedures will be implemented in any state or school system. Selected portions of the procedures should be freely used as needed and modified to be compatible with local and state educational practices and regulations.

RECRUITING PERSONS WITH NON-TEACHING DEGREES

Recruiting persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness has been widely practiced in those states where a shortage of teachers has existed. These are persons who have baccalaureate degrees in some area of agriculture, forestry, wildlife, biological science, and related areas, but who have not met the certification requirements to be teachers of vocational agriculture/agribusiness. Such persons often have majors on their degrees in areas where the supply of graduates exceeds the demand. Teaching vocational agriculture/agribusiness allows them to use their technical competence and, at the same time, remain in contact with the technical area in which they have high interest and education.

The purpose of this section is to describe the need for recruitment, responsibility for recruitment, sources of teachers of vocational agriculture/agribusiness, and strategies for recruiting teachers of vocational agriculture/agribusiness.

Need for Recruitment

The growth and effectiveness of any organization depends upon many factors. These factors may include areas such as program planning, management, and evaluation. Furthermore, recruiting and selecting qualified personnel have a direct impact upon the success of that organization. Relating this reasoning to the teaching profession, in vocational agriculture/agribusiness successful educational programs depend upon many of these same elements. However, of more importance, the recruitment and selection of high quality teachers is a key factor in offering meaningful educational instruction. Thus it is imperative that for vocational education in agriculture/agribusiness to remain a viable program in the educational system of the United States, recruitment and selection activities cannot be left to chance but must represent a systematic and planned effort. Another major concern in the area of planned recruitment activities is that unless vocational educators in agriculture/agribusiness take the initiative in recruiting, the job will not be done and questions could be raised about the quality of the personnel entering the profession.

The importance of recruiting teachers of vocational agriculture/agribusiness has taken on new meaning in recent years. One situation that has had an influence on the need for a more systematic recruitment effort has been the development of specialized vocational agriculture/agribusiness programs. Several years ago nearly all of

the students who entered teacher education programs were from the farm, or had strong farm backgrounds. After completing degree requirements in agricultural education for teacher certification, these individuals were placed as teachers in local departments of vocational agriculture/agribusiness teaching a program which primarily consisted of production agriculture subject matter. With the passage of the Vocational Education Act of 1963, federal legislation provided for the expansion of vocational agriculture/agribusiness instruction into areas other than production agriculture. Leaders in agricultural education began to study the employment needs in the agribusiness field and were able to identify specialized educational programs in agriculture/agribusiness.

As the specialized programs began to be infused into local programs throughout the United States and students began to take advantage of the opportunity to broaden their interests in the field of agricultural industry, several things occurred. The number of new specialized programs increased, student enrollment increased, and new adult/young adult programs were established. Thus, local schools were looking for more teachers and teachers with different types of expertise. At the same time, the number of graduates in agricultural education from teacher education institutions was not increasing at the same rate as the demand. A shortage of teachers of vocational agriculture/agribusiness began to occur. This shortage has existed for several years

and is projected to continue as enrollments increase further. Thus, local schools desiring to maintain programs of vocational agriculture/agribusiness have been forced to identify potential teachers other than those who were graduating from the traditional agricultural teacher education programs. This has resulted in individuals being hired as teachers who did not meet established teacher certification requirements. This caused educators to raise some valid concerns about the pedagogical competency of these teachers as they began assuming teaching responsibilities without professional teacher education. For vocational education in agriculture/agribusiness to remain a viable program in the schools of the United States, all personnel recruited from any source must be of high quality and meet certain minimum standards. Professional agricultural educators cannot and should not accept any individual into the teaching profession who does not meet these minimum standards.

Responsibility for Recruitment

It could be said that anyone who is associated with programs of vocational agriculture/agribusiness must take an active role in recruitment activities. Planned recruitment activities are crucial as the shortage of teachers continues, and as the need to identify individuals with non-teaching professional degrees as potential teachers remains a key alternative in helping to balance the supply and demand situation. People who are active in recruiting include local school administrators, supervisors in agricultural education, teacher educators, and teachers.

Local Administrators. Individuals at this level assume a critical role in recruiting potential vocational agriculture/agribusiness teachers, especially when a shortage of teachers exists. This importance can be recognized when one considers that a person can be hired at the local level as a teacher without any involvement of a state supervisor, teacher educator, or other teacher. While local school authorities have the right to recruit and employ those individuals they want as teachers of vocational agriculture/agribusiness, professional educators in agriculture/agribusiness education must not assume a passive role when non-professional teachers are recruited and hired to fill positions vacant due to a shortage of fully certified teachers.

Supervisors. Supervisors should take an active role in helping to identify potential teachers for existing vacancies. They should establish open lines of communication with teacher education departments in order to expedite the identification of prospective teachers. Once a potential applicant has been identified, supervisors should be ready to react to the qualifications of this individual for a particular teaching situation. Input from supervisors to the local school authorities is vital since they are charged with the responsibility of program standards and program development in agriculture/agribusiness education.

Teacher Educators. Teacher educators are in a unique position to identify non-teaching degree holders who might have the interest and potential to become teachers of vocational agriculture/agribusiness. They can establish and maintain valuable contacts

with the different departments within the university setting, especially those in agriculture.

Teachers. Local teachers of vocational agriculture/agribusiness should constantly be alert for those indivudals who have the potential to become good teachers. Names of these individuals should be given to local school administrators, state or district supervisors, and teacher educators for further personal contact. Furthermore, the local or state professional association for teachers of vocational agriculture/agribusiness should accept the recruitment of potential teachers as one of its goals and provide the necessary committee structure to see that the goal is obtained.

Agricultural Agencies. While people within these agencies will not see the recruitment of potential teachers of vocational agriculture/agribusiness as a major responsibility, the employees of the agencies need to be alerted to the need for quality teachers and encouraged to recommend potential teachers to professional educators. This implies that all professional educators must make a planned effort to personally contact relevant agricultural agencies to inform them of the opportunities in teaching. It may be necessary to outline the procedures to follow in beoming a teacher.

Sources of Teachers

One of the first steps in recruiting prospective teachers is to identify the viable sources of such persons. There are three distinct sources: agricultural majors other than agricultural education, graduates in some area of agriculture other than

those in agricultural education who are seeking employment, and employees in agricultural business and industry who have baccalaureate degrees.

Students who are majoring in agriculture in areas other than agricultural education comprise an important source to be considered. While universities might have different departments in agriculture, some of the common agricultural majors that would represent a potential source of teachers are:

Horticulture	Agricultural Economics
Animal Science	Agricultural Mechanics
Agronomy	Poultry Science
Forestry	Dairy Science
Entomology	Wildlife

The key to successfully recruiting students from these majors is to identify those students with a possible interest in teaching vocational agriculture/agribusiness early in their college careers. In this way, certification requirements could either be partially or completely fulfilled before graduation and eliminate deficiencies that would need to be corrected at a later date.

Those students who have already received their baccalaureate degrees in a non-teaching major and who are still seeking employment represent another source of potential teachers. In fact, this group of individuals can represent a sizeable number if for some reason the economic situation is unfavorable or a large number of graduates in one year results in an over supply based on the limited occupational demand in their respective specialty areas.

The third major source of teachers of vocational agriculture/agribusiness is the employees of agricultural businesses and industry. Many students graduate each year from agricultural colleges and go

directly into private or public employment in agribusinesses or agricultural agencies. This source of teachers can be of particular importance if a local school is seeking applicants who have recent or specialized occupational experience.

In summary, all potential sources must be thoroughly investigated to identify individuals who might have an interest in teaching vocational agriculture/agribusiness. It might be that those individuals are out in the communities and are reluctant to come forth or do not know who to contact in seeking a new career objective as a teacher.

Strategies for Recruiting Potential Teachers

Any strategy or activity that results in a potential teacher actually becoming a teacher could be termed effective. In reality, there might be one factor or many factors that influence a person to consider teaching agriculture/agribusiness. Thus, it is important that anyone considering the development of recruitment activities be aware of the various techniques that can be used, either individually or in combination with one another. Various techniques for recruitment are outlined below.

1. Encourage all professional educators in agriculture to individually contact (by telephone, letter, or in person) potential teachers and discuss the opportunities of teaching as a career.
2. Contact representatives of agricultural businesses or agencies and acquaint them with the need for agriculture/

agribusiness teachers. Their help in identifying and recommending potential teachers should also be secured.

3. Make presentations on the career opportunities in teaching to students majoring in other agricultural departments in universities.
4. Use selective mailings to recent graduates or students nearing graduation.
5. Utilize the news media to develop an awareness of the opportunities in teaching.
6. Develop publications that inform persons about teaching opportunities.
7. Inform potential teachers of the requirements for teaching.
8. Form a committee to coordinate the recruitment effort for the entire state.
9. Form a recruitment committee in the professional teachers association.
10. Encourage collegiate groups, such as the FFA, agricultural education societies, or Alpha Tau Alpha to plan and conduct recruitment activities.
11. Teach a unit in one of the college courses on the teacher's role and responsibilities for the recruitment of potential teachers.
12. Construct displays or exhibits for State FFA conventions, fairs, shows, or other public activities highlighting career opportunities in teaching.

While each of the preceding activities could be used in effective recruiting, the enthusiasm displayed by the professional educators in agriculture and by the undergraduate agricultural education majors about teaching is a key. An enthusiastic, healthy and positive attitute toward teaching will be a motivating force in recruiting quality, potential teachers. Furthermore, a review of the literature and research findings indicates that personal contact with potential teachers has been one of the most effective recruitment techniques to use. Thus, individual contacts with potential teachers who are personable and filled with enthusiasm should be included in any planned recruitment activities.

SELECTING PERSONS WITH NON-TEACHING DEGREES

Need for Selection

Recruiting potential teachers for vocational agriculture/agribusiness is only the first step in securing future teachers. All of the individuals identified may not possess the necessary qualifications for becoming a certified teacher. Thus, a process for selecting the most qualified individuals must be developed and utilized.

The selection process should include a set of statements reflecting standards or minimum competencies needed by individuals desiring to become certified teachers. These standards are needed in order to maintain and improve the quality of the program. If standards are not established, the result would be a weaker program due to teachers being hired who do not possess the professional competence, occupational experience, or dedication needed to carry out an effective program of vocational agriculture/agribusiness.

Selection of Teachers

The final selection of a teacher for a vacancy in a local department rests with the local school authorities. Hopefully, however, they will seek input from professional agricultural educators before a final decision is made. Special efforts must be put forth to assure that the local teaching staff in the agriculture/agribusiness department is involved and that contact with state supervisors is made before the final selection is made. It is

through a team effort such as this that qualified, competent individuals can be identified for teaching positions.

Criteria for Selection of Teachers

The criteria to be used in selecting teachers can be grouped in three areas: educational background, professional potential, and occupational experience. Before effort is made to match an individual with a vacancy in a local school, a specific job description or list of responsibilities must be developed for that vacancy, if none now exists.

While it would be impossible to list the specific selection criteria for each situation, several examples have been identified to help illustrate how criteria could be used in selecting quality teachers.

Educational Preparation. Educational preparation would include several factors. Among these would be that the individual:

1. Possesses adequate technical competence as measured by performance tests or an evaluative board that might be comprised of teacher educators, state supervisors, teachers, and/or industry personnel competent in the technical area under consideration.
2. Possesses academic preparation that is congruent with the teaching specialty desired.
3. Possesses a baccalaureate degree.

Occupational Experience. Two criteria for occupational experience are stated. The individual:

1. Possesses suitable work experience related to the area of teaching specialty.

2. Possesses a minimum number of hours or years of work experience.

Candidates for teaching positions must have depth and breadth of technical competence in the area of teaching specialty. This can be assessed by an examining board comprised of state supervisory personnel, teacher educators, teachers of vocational agriculture/agribusiness, industry representatives in the technical area, and other individuals. Performance and cognitive tests can also be utilized, but the limitations of such tests must be fully realized.

Professional Potential. While some criteria in this area may be based on subjective opinion, it is nonetheless an important area to consider. Examples of criteria might be that the individual:

1. Possesses interpersonal skills that would enable him or her to serve as a teacher and acceptable role model.
2. Possesses a positive attitute toward teaching and working with youth and adults.

Other experiences that could be considered in the selection of individuals might relate to their prior enrollment in vocational agriculture while in school, FFA experience, participation in community activities, membership in organizations, teaching or counseling experiences, or other related personal experiences. These experiences or the lack of them should not be used as the sole basis for selecting individuals to become teachers of vocational agriculture/agribusiness.

Once a non-teaching degree holder has been recruited and selected for a teaching position, the task now becomes one of

bringing that individual up to the standards for teacher certification. This implies that deficiencies must be identified and a plan for correcting the identified deficiencies developed so that within a reasonable length of time the individual will not only meet full teacher certification requirements in that state, but will also possess the basic skills needed to become an effective teacher of vocational agriculture/agribusiness.

PREPARING PERSONS WITH NON-TEACHING PROFESSIONAL DEGREES AS TEACHERS OF VOCATIONAL AGRICULTURE/AGRIBUSINESS

The notion that a person who has a high level of technical competence but no training in pedagogy will be a good teacher of vocational agriculture/agribusiness is untrue. All who become teachers of vocational agriculture/agribusiness should have certain pedagogical competencies. And these are best developed through systematic preservice and inservice teacher education procedures.

The duties of a teacher of vocational agriculture/agribusiness are more than just teaching classes. The duties include the administration and management of a program. The program has several components, including providing classroom and laboratory instruction for in-school students, planning and carrying out supervised occupational experience programs with students, organizing and advising the FFA chapter, and, in many schools, providing adult/young adult instruction. These activities are best fulfilled by a teacher who has thorough preparation in teacher education.

Since vocational agriculture/agribusiness has been handicapped by a shortage of teachers, it is not always possible to have a teacher who is thoroughly prepared. This section of Part II presents a description of procedures to follow in preparing persons who are technically competent but who lack specific teacher education preparation.

Nature and Requirements of the Teaching Position in Vocational Agriculture/Agribusiness

A preparation plan for preparing persons with non-teaching degrees for full teacher certification must be built upon the duties or responsibilities that are associated with that teaching position. While specific duties may vary from state to state and even within states and local departments, there are several general activities that most teachers will be expected to perform. Examples of the common duties of a vocational agriculture/agribusiness teaching position are:

1. Teaching courses using classroom and laboratory facilities available.
2. Advising the FFA and associated activities.
3. Supervising occupational experience programs.
4. Conducting young farmer and adult classes.
5. Directing and managing, as appropriate, land laboratories, greenhouses, and other facilities.
6. Planning and administering departmental activities.
7. Cooperating with the school administration in the overall operation of the school.
8. Recognizing the importance of and practicing good public relations.

Thus, it becomes apparent that if individuals are to be effective teachers, provision must be made to develop the competencies in these individuals that will permit them to carry out those responsibilities associated with the teaching position. For example, if advising the FFA is an expected responsibility, then provision must be made to develop the necessary competencies

in that individual so he or she can successfully advise the FFA. If the duties and responsibilities of a teacher of vocational agriculture/agribusiness are clearly and accurately described, then the state teacher certification requirements should reflect those standards to assure that each individual will indeed have those competencies needed to carry out the responsibilities associated with the teaching position.

State Teacher Certification Requirements

All states have a fairly precise statement of requirements expected of individuals desiring to be certified as teachers within the various teaching fields. Even though states vary with specific requirements due to special situations or laws within that state, three general areas of requirements can usually be identified and these relate to degree requirements, college course requirements, and occupational experience requirements.

Degree Requirements. If an individual is to successfully teach in an area of vocational agriculture/agribusiness, it is essential that he or she have a baccalaureate degree with a major in an appropriate area of agriculture. While the degree in and of itself is not the important factor, the technical agriculture courses that were required in order to receive that degree represent essential agricultural knowledge needed by that individual to become an effective teacher. Furthermore, the person's major should be in the area of agriculture he or she intends to teach.

There could be a situtation where a potential teacher has been identified who does not have a baccalaureate degree in agriculture. For example, an individual may have graduated in geology and took some agricultural courses during his or her undergraduate academic study. Thus, this individual could become certified as a teacher of vocational agriculture/agribusiness by taking additional agriculture courses to reach the number of credit hours specified by state certification regulations. The recommendation that a degree be in agriculture and/or that a certain number of credit hours be taken in agriculture would help to assure that the individual has the necessary basic technical agricultural knowledge and skill needed to be a successful teacher.

College Course Requirements. The college courses that are required should contain subject matter content that will enable individuals to carry out the responsibilities identified earlier. While the structure of this content might be individual courses in some situtation, e.g., a separate course on the FFA or supervised occupational experience, in other cases the content might be intermingled into several courses. Regardless of the structure used or advocated, it is essential that the content of the courses include those critical professional competencies that will be needed by each individual in a teaching situation.

It is also important to note the requirements that relate to the development of the pedagogical skills of teachers. This might include such areas as educational psychology, sociology, methodology of teaching, and communication.

Occupational Experience Requirements. The importance of teachers of vocational agriculture/agribusiness possessing some type of occupational experience has been noted for many years. The logic behind this is that an individual who has experience will be more effective if he or she can help students apply instructional content to local employment opportunities or to the development of skills that are essential for job entry. While states may vary on the specific occupational experience required, it would be well to note that the recently developed Standards For Quality Vocational Programs in Agriculture/ Agribusiness Education recommend minimum experience requirements for each of the teaching specialties. These recommendations are as follows:

Production Agriculture - Two or more years of farm experience or equivalent occupational experience.

Agricultural Supplies and Service - A minimum of 3,000 hours of meaningful job employment in the agricultural supplies and services area.

Agricultural Mechanics - A specific recommendation was not made in the Standards for this specialty area. However, the minimum experience should be 2000 hours in the agricultural mechanics area.

Agricultural Products - A minimum of 12 months or 2000 hours of gainful employment in agricultural products occupations.

Ornamental Horticulture - Employed 12 months or 2000 hours in the ornamental horticulture industry.

Agricultural (Natural) Resources - A specific recommendation was not made in the Standards to this specialty area. However, the minimum amount of experience should be 2,000 hours in some area of agricultural resources.

Forestry - A specific recommendation was not made in the Standards for forestry. However, the minimum amount of experience should be 2,000 hours in the forestry area.

Documenting Experiences of Applicants

Various ways are available to document experiences possessed by applicants and the methods selected for this documentation depend to some degree upon the verification to be made. The documentation process should not be taken lightly since the applicant is entitled to a fair and just recognition of past experiences. At the same time, an accurate assessment of the participant's experiences will provide teacher education institutions as well as the applicant with specific areas of deficiencies that must be corrected.

The verification of experiences will range from an objective assessment to a highly subjective observation, depending upon the data available.

Degree Requirements. Verification must be made through the submission of official transcripts from the degree granting institution.

College Course Requirements. Verification must be made through the submission of official transcripts from all institutions attended.

Occupational Experience. Past occupational experiences

could be documented in several different ways. First, a specific form could be completed by the applicant for the purpose of listing occupational experience. The format for such a form might be as shown on the next page.

Another method of documenting occupational experience would be through the requirement that an official resume be submitted. This would not only help to assess occupational experience, but would also provide additional information about an applicant. Finally, a more official verification of experiences could be obtained by soliciting letters from the applicant's former employees asking for a description of the applicant's duties and responsibilities.

In some cases, an assessment of the applicant's technical knowledge may be justified and this could be accomplished several ways. Some of the more common methods are occupational competency test results, a competency check sheet completed by the applicant, results of administering a standardized teacher's exam, or through the use of other professional examinations.

An interview with the applicant could provide some basis for an evaluation of the technical competence possessed as well as the personal qualities and characteristics of the individual. For example, an assessment could be made of the applicant's personality, ability to communicate, and professional commitment to teaching. This is a subjective approach but should be effective in the process of assessing the experience and qualifications of an individual to become a teacher.

INVENTORY OF OCCUPATIONAL EXPERIENCE

Please list and describe below all agriculture/agribusiness occupational experience

Name and Address of Agribusiness	Job Title	Describe Type of Experience	Dates of Experience FROM-TO	Name and Address of Immediate Supervisor
			-	
			-	
			-	
			-	
			-	

I certify that the above information is correct to the best of my knowledge.

Date _____ _____

Signature of Applicant

In summary, the documentation process should provide adequate, appropriate, and quantifiable data to those individuals charged with making a final evaluation of each applicant's qualities in terms of the state certification requirements. Furthermore, the data collected will be of immense value when each applicant begins to identify what deficiencies need to be corrected in order to meet full teacher certification requirements.

Evaluation of Experiences in Terms of State Certification Requirements

The evaluation of experiences for each applicant should be accomplished as quickly as feasible when an individual seeks to be hired as a teacher of vocational agriculture/agribusiness. In this way, the applicant is familiar with what is needed to become fully certified from the beginning and is not misled or uninformed of his or her deficiencies. Another critical reason for making an immediate evaluation of a person's qualifications is that local schools desire to fill vacancies as soon as they open during the school year. Thus, when a prospective applicant has been recruited, the local school administrator wants to verify in a relatively short time the feasibility of being able to fill that position with that applicant and the applicant wants to know what and how many deficiencies must be corrected in order to achieve full teacher certification.

The structure for the evaluation of each applicant's credentials against state certification requirements should be

systematic and routinely followed. In some states, this responsibility might rest with one individual, i.e., the state supervisor in agricultural education or a staff member in the certification department. Another approach would be through the use of a committee. The membership of this committee might be comprised of representatives from the state certification agency, local school administrators, teacher educators, state supervisory staff, and experienced teachers.

Identifying Deficiencies of the Applicant and Setting Priorities for Correcting Deficiencies

It is helpful at this stage if an organized format is used in working with the applicant to clearly identify existing deficiencies and develop plans for corrective measures. A possible form to use at this time in working with the evaluation committee and the applicant is included in Figure 1. This plan might be completed by a teacher educator in consultation with local administrator(s), state supervisory personnel, the teacher involved, and other individuals.

Part A of the Personal Preparation Plan provides the opportunity to list briefly and clearly the deficiencies that an applicant currently has in regard to state certification standards. The specific deficiencies can be identified and listed under one of the four sub-headings: professional teaching competencies, technical competencies, general education background, and/or occupational experience. If no deficiencies are identified for one of the sub-headings, the word "NONE" can be written in the blank space.

Before Part B is completed, some prior though must be given as to what deficiency should be eliminated first. This involves placing a priority on

Figure 1

PERSONAL PREPARATION PLAN FOR TEACHER CERTIFICATION

for

_____

(Teacher's Name)

_____ _____

(Teaching Position) (Date Prepared)

_____ _____

(Mailing Address) (Telephone Number)

PART A - LIST OF DEFICIENCIES:

A. Professional Teaching (Education) Competencies

B. Technical Competencies

C. General Education Background (Competencies)

D. Occupational Experience

PART B - PLANS FOR CORRECTING DEFICIENCIES:

DEFICIENCY	CORRECTIVE ACTION PLANNED	DATE FOR COMPLETION	DATE ACCOMPLISHED
1. 2. 3. 4. (extend this list as needed)			

Teacher Educator Advisor - _____

Telephone Number - _____

Copies to: Local Administrator Supervisor
Teacher Educator
Teacher
State or District Supervisor

_____

Signature of Person Preparing Plan

the deficiencies. While some debate could be put forth to support each deficiency as being the most critical one to meet first, the priorities should be based upon the order of the sub-headings on the form. For example, the professional teaching competencies should be corrected first, technical competencies second, and so forth. However, this is very idealistic and situations could arise where this order of priorities could not be followed. An example is presented here to help to illustrate this point. Assume that an individual has been identified as having deficiencies in both professional teaching competencies and technical competencies. Enrollment in an off-campus agricultural engineering course is immediately possible and this course is one that is needed by the applicant. However, a course in professional teaching competencies will not be available to the applicant until the next college term. Thus, it would be more beneficial for the applicant to enroll in the agricultural engineering course now rather than wait a full year until it is offered again.

After the priorities have been established, a recommended time table for correcting these deficiencies should be set. The time table will assist the individual in developing a regular, systematic plan for fulfilling all the deficiencies within the prescribed time limits imposed by the state certification agency. The proposal form in Figure 1 allows for the completion date for each deficiency to be set and progress toward each activity can be assessed by noting the "date accomplished" column.

The Personal Preparation Plan should be carefully reviewed with the applicant in order to avoid confusion or misunderstandings. Furthermore, the applicant should be encouraged to review the plan several times each year. It would also be desirable to meet with his or her teacher education

advisor at least once per year to review the progress being made in correcting the deficiencies. Any revisions in the proposed time table can occur at this time and be noted accordingly on the forms. An example of a completed personal preparation form has been developed and is presented in Figure 2.

Developing a State Delivery System to Meet the Needs of Non-Certified Teachers.

The Personal Preparation Plan developed for the non-certified individuals can serve as a valuable planning aid for state staff in agricultural education. By maintaining a file of teachers currently meeting certification requirements, a summary of the total needs for a particular state can easily be assessed. However, when all the data have been summarized and analyzed, there are certain key professional activities that would be desirable to plan and hold prior to an individual's first teaching day. Other professional activities might be better provided later during the school year. A list of topics that would be desirable to cover during the summer and prior to the individual's first day of teaching might include the following:

1. Becoming familiar with agricultural agencies,
2. Identifying teaching resources in the community,
3. Understanding school systems,
4. Using basic teaching methods,
5. Managing classrooms and laboratories,
6. Identifying sources of supplies and materials,
7. Preparing lesson plans,
8. Developing a teaching calendar or course of study, and
9. Completing reports.

The delivery of the above topics may be planned in several different ways. Among the more common approaches would be credit courses, workshops, field trips, or seminars. While these approaches may appear to be better suited as group activities, an individualized approach could also supplement

Figure 2

PERSONAL PREPARATION PLAN FOR TEACHER CERTIFICATION

for

Richie Hogue

(Teacher's Name)

Agricultural Mechanics	*6/1/79*
(Teaching Position)	(Date Prepared)
Anytown, USA	*(601) 325-4734*
(Mailing Address)	(Telephone Number)

PART A - LIST OF DEFICIENCIES:

A. Professional Teaching (Education) Competencies *6 quarter hours in Agricultural Education and Methods and Student Teaching*

B. Technical Competencies

One course in teaching Agricultural Mechanics

C. General Education Background (Competencies)

A course in First Aid

D. Occupational Experience

NONE

PART B - PLANS FOR CORRECTING DEFICIENCIES:

DEFICIENCY	CORRECTIVE ACTION PLANNED	DATE FOR COMPLETION	DATE ACCOMPLISHED
1. *Introduction to Ag Ed*	*Ag Ed 3000*	*7/30/79*	*7/30/79*
2. *Methods*	*Ag Ed 4030*	*8/30/79*	*8/30/79*
3. *Teaching Ag Mechanics*	*Ag Ed 3111*	*7/30/80*	*7/30/80*
4. *First Aid*	*Health 4010 (Take at Maxey Community College*	*12/30/81*	
5. *Student Teaching*	*Substitute 2 full years of teaching vo-ag*	*6/30/81*	

Teacher Educator Advisor - *Dr. John Moore*

Telephone Number - *(888) 111-3333*

Copies to: Local Administrator Supervisor
Teacher Educator
Teacher
State or District Supervisor

Jack Brown

Signature of Person Preparing Plan

or even in some cases, replace planned group activities. The use of modules, learning activity packages, or individual counseling are examples of strategies that could be used during this approach. If the state requires that all teachers take standardized teachers examinations, then the first summer would be the most logical time for the individual to fulfill this requirement.

After the school year begins, the professional activities could take on a different nature to correct the identified deficiencies. Examples of these professional activities might include the following:

1. As appropriate, take courses congruent to the recommendations in the Personal Preparation Plan.
2. Participate in an existing first year teacher program and/or course.
3. Participate in professional activities.
4. Work with an assigned master teacher of vocational agriculture/agribusiness.
5. Visit selected departments of vocational agriculture/agribusiness.
6. Work with professional agricultural educators who visit the department, i.e., state supervisory staff, teacher educator, master teacher, and/or local school administrator.

To avoid confusion and yet maximize the professional expertise that can be provided to the teacher, it would be well if specific roles for each of the professional agricultural educators were identified. While these roles might vary with local situations, the following list provides a sound base from which further planning can originate.

Possible Staff Responsibilities of Various Individuals in Preparing Persons with Non-Teaching Professional Degrees

State Supervisory Personnel

1. Conduct a supervisory visit two times per month
2. Acquaint the teacher with state education procedures, meetings, and reporting activities
3. Assist with program planning

Teacher Educators

1. Hold small group meetings by regions on a regular basis (once per quarter or semester)
2. Visit bimonthly in teacher's school
3. Critique methods of teaching and class management
4. Assist in updating teaching calendars or courses of studies
5. Review lesson plans

Master (experienced) teacher (Agriculture teacher outside of the teacher's school district)

1. Assist in developing supervised occupational experience programs
2. Assist in planning FFA activities at local, regional, and state levels
3. Encourage professional organization involvement
4. Assist in solving daily problems
5. Local program orientation
6. Assist in facility organization
7. Assist in planning adult education programs.
8. Visit bimonthly in teacher's school

Local Administrator

1. Acquaint teacher with school routines, policies and procedures
2. Observe classes and suggest teaching improvement
3. Observe classroom management and make suggestions
4. Assist in ordering consumable materials and instructional resources.
5. Visit briefly in the teacher's department each week

It should also be encouraged that regardless of who is visiting the teacher, positive reinforcement be given to the teacher. This should represent an honest effort by the professional agricultural educator and not a token comment. The encouragement received by the beginning teacher just might make the difference between a pleasant teaching experience and one that results in another vacancy at the same school next year.

The professional activities should continue to be planned and conducted each year with the ultimate goal of providing

the opportunity for each individual to eliminate the identified deficiencies. This can be accomplished by a continuous review of the Personal Preparation Plan to determine what activities have been completed and what still needs to be accomplished.

Evaluation of the Personal Preparation Plan Model

The procedure adopted for recruiting and selecting potential teachers, identifying deficiencies, developing the Personal Preparation Plan, and delivering the instruction must be continuously evaluated to perfect the overall concept of working with teachers who have non-teaching professional degrees.

The evaluation must include input from all of those who were involved in the plan. This evaluation would best be held after the overall plan had been in operation for at least one year. However, certain evaluations could be held earlier. For example, immediately after the evaluation committee reviewed the credentials of all non-teaching degree holders and made their recommendations for correcting deficiencies, the committee could reconvene to discuss how the process went. While it would not be wise to make recommended changes at this early date, any suggestions made could be noted and referred to later in the year or when plans were being developed to review the credentials of applicants during the next year. The Personal Preparation Plan could be evaluated continuously as professional agricultural educators and the teachers used the form. Regardless of the form's structure or suggestions made in regard to the forms, the format must be such that it has high utility for those who are going to use it.

The original plan developed by a state for the recruitment and selection of teachers, the process for identification of deficiencies, and the plans for correcting those deficiencies will in all probability not be the final document. However, if those involved in the process keep in mind that one of the ultimate goals of their efforts is to help individuals to become effective teachers, then agricultural/agribusiness education will continue to be strengthened as non-teaching degree holders are recruited to be agricultural/agribusiness teachers.

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APPENDIX A

Summary of the Minutes of
Advisory Committee Meeting

September 26-27, 1977

MINUTES OF PROJECT ADVISORY COMMITTEE MEETING
September 26-27, 1978
Room 151, Industrial Education Building
Mississippi State University

The advisory committee members and the project staff members met in the conference room at 8:30 a.m., on Monday, September 26, 1977. Members of the advisory committee are Dr. Elmer Cooper, State Supervisor, Maryland Department of Education; Mr. C. M. Brewer, State Supervisor, Mississippi Department of Education; Dr. David Williams, Teacher-Educator, Iowa State University; Dr. David McCracken, Teacher-Educator, The Ohio State University; Ms. Elissa Steeves, Teacher, Pulaski County (Virginia) High School; and, Mr. Ed Faurot, Teacher, Louisville (Mississippi) Vocational Center. Project staff present included Dr. Jasper S. Lee, Project Director; Dr. Ronald A. Brown, Project Associate Director; Ms. Susan Moore, Project Coordinator; Ms. Mary Jo Hogue, Research Assistant; and, Ms. Sheila Boswell, secretary. Also present was Dr. John W. Oren, Head, Department of Agricultural and Extension Education.

The meeting was called to order by Dr. Jasper Lee. He introduced project staff members. Members of the advisory committee introduced themselves.

Dr. John Oren welcomed the group and described the Mississippi State University Agricultural and Extension Education Department, including a brief review of enrollment and the programs offered.

After introductions and the welcome a brief tour was led through the Department by Dr. Ronald Brown.

Following the tour, Susan Moore distributed handouts which described and emphasized the importance of the project, including a statement of the problem and objectives. The six objectives were discussed in detail and questions by the advisory committee members were answered.

Mary Jo Hogue discussed the progress of the project to date. The following topics were included:

(a) Progress in review of literature related to the project
(b) Development of survey forms, both state supervisors and teacher educator surveys (samples were distributed)

Progress in the review of literature relating to the project was described. Samples of both the state supervisors and teacher educators surveys were distributed. A report on the preliminary findings of the survey of state supervisors was given and the following comments and suggestions were made:

David McCracken asked if the survey was nationwide rather than dealing with those states who definitely had special training programs.

He stated that Ohio could only send a partial list at most, since a complete list of teachers with non-teaching professional degrees would not be ready for several weeks; but, he assured us he would help prepare the list as he got back to Ohio. It was noted that some states would need a good deal of time to get a list of teachers and that New York and New Jersey were not able, without a great deal of trouble, to send a complete list.

Other questions were raised by David Williams concerning objective five, evaluating the strategies used in training persons with non-teaching professional degrees as teachers of vocational agriculture. It was asked if the list of teachers we had made included newly trained persons or those that had been in the field five or more years, that the latter would probably have gone through different training programs. Dr. Williams stated that we would gain the most beneficial results from those teachers that had been in the field about 3-3 1/2 years, since they had acquired enough experience to appropriately evaluate their training program. Overall, we will be working with two groups--those that will have completed a training program for non-teaching professional degree persons and are fully certified now and those that will be in the process of getting certified.

Another concern that was raised by the advisory committee was, Are we including non-degree persons in our training program for Agriculture Mechanics positions. The project proposal was then restated that we'd only survey those with non-teaching professional degrees.

Three key ideas to include in our training program were brought out and they included SOE programs, Development of Programs, and the FFA. The advisory committee thought that those three areas were the most important in the basic training of a non-teaching professional degree person, to ready him for the first year of teaching.

Susan Moore next circulated copies of temporary findings of the State Supervisor survey. These were studied and the most not able findings were mentioned. These included number 1 in that five out of the eight states that had an adequate supply of professionally trained vocational agriculture/agribusiness teachers had no training programs for non-teaching professional degree persons. These states included Connecticut, Nevada, Oklahoma, Rhode Island, and Utah. In question number 5 the three most frequently used criteria in selecting persons with non-teaching professional degrees as agriculture teachers were educational background, type of work experience, and length of work experience. Other results were also noted and discussed.

The Teacher Educator survey was discussed next and it was noted that temporary findings had not yet been tabulated. The advisory committee believed the results would be very similar.

The project committee asked if a follow-up letter should be sent to teacher educators, since we had received an approximate 70% return.

They advised it was not necessary. Another suggestion regarding the teacher educator survey was that we should possibly send our other letter to the 14 states who said they actively recruit teachers and get specifications of their recruitment procedures if they did not send them.

It was next recommended that we should not send a survey to state certification officials, since we had already received the certification requirements from most states.

A tentative teacher survey was discussed next. First, the project committee asked if they should survey the entire list of teachers received or a sample population. The advisory committee suggested to use a random sample of the total population. Another suggestion included using simple terminology so the teachers would not be confused. Information they felt needed was to determine the length each individual had been teaching, the length and type of work experience, and whether or not they had been enrolled in vocational agriculture/agribusiness and FFA in high school. The advisory committee also stated that the teacher survey should be coded and the cover letter would be the key. They also advised us to get consent from the Honor Relations Committee before sending the survey out.

Following the discussion of the teacher survey, we received ideas for the immediate supervisor survey. The advisory committee suggested using similar questions with several open-ended questions at the end of the survey. The main result from this survey was to see how inclined the immediate supervisor would be to hire another person in this category.

Succeeding the surveys we briefly gathered ideas from the advisory members concerning a training program for non-teaching professional degree persons. The project committee suggested having three options in our training program: (1) certification requirements would be met before starting to teach, (2) some certification requirements would be met before starting to teach and the rest while teaching, and (3) all certification requirements would be met while teaching. The advisory committee's suggestions included having a strong summer program before they teach including training in FFA, program planning, and supervised occupational experience programs, and they should receive undergraduate credit for this workshop. They added, besides having a pre-service workshop before beginning teaching, some type of workshops were needed while teaching followed by a program the next summer. Dr. McCracken also mentioned a strong visitation program was needed and Dr. Williams reinforced this by adding that using an experienced teacher nearby in a buddy system worked well.

The last item of business discussed was the time and place of the next advisory committee meeting. It was tentatively set for April 7, 1978, in Lexington, Kentucky.

After photographs were taken, the meeting was adjourned.

October 5, 1977
Date

Sheila Boswell
Secretary

APPENDIX B

Summary of the Minutes of
Advisory Committee Meeting

April 6-7, 1978

MINUTES OF PROJECT ADVISORY COMMITTEE MEETING
April 6-7, 1978
Room A, Continental Inn
Lexington, Kentucky

The second meeting of the advisory committee was held on April 6-7, 1978, at the Continental Inn in Lexington, Kentucky. Members of the advisory committee present included Dr. Elmer Cooper, State Supervisor, Maryland Department of Education; Mr. C. M. Brewer, State Supervisor, Mississippi Department of Education; Dr. David Williams, Teacher Educator, Iowa State University; Dr. David McCracken, Teacher Educator, The Ohio State University; Ms. Elissa Steeves, Teacher, Pulaski County (Virginia) High School; and Mr. Ed Faurot, Teacher, Louisville (Mississippi) Vocational Center.

Project staff present for the second meeting included Dr. Jasper S. Lee, Project Director; Dr. Ronald A. Brown, Project Associate Director; Ms. Susan Moore, Project Coordinator; and Ms. Mary Jo Hogue, Research Assistant.

The meeting was called to order at 1:00 p.m. on Thursday, April 6, 1978, by Dr. Jasper S. Lee. Members were welcomed, and the agenda was discussed.

Dr. Ronald Brown reviewed project objectives followed by a project status report presented by Susan Moore and Mary Jo Hogue. Susan Moore discussed the findings of the State Supervisors Survey and the teachers survey, while Mary Jo Hogue reviewed the findings of the teacher educators and immediate supervisors survey. The findings from the analysis of variance (ANOVA) and the Duncans new multiple range tests were also discussed by Mary Jo Hogue.

Recommendations from the advisory committee concerning the findings included: (1) reanalyzing the recruitment and certification ratings on a four point scale, excluding "not used" on all three instruments; (2) the table listing the findings of the areas of vocational agriculture/ agribusiness taught by non-teaching professional degree persons be reorganized to include the actual number of persons teaching a particular area besides the number of instructors teaching each particular grade; and (3) adding another category of the number having no agricultural experience on the table listing the type of work experience of non-teaching professional degree persons or to include another separate table with the following three categories-- (a) number with agricultural experience, (b) number with non-agricultural experience, (c) number with both agricultural and non-agricultural experience.

The status of the training plan was discussed by Jasper S. Lee. In order to obtain ideas from the advisory committee on a training plan for persons with non-teaching professional degrees, the advisory committee was divided into two groups. One group, which included Ronald Brown, Susan Moore, Elissa Steeves, C. M. Brewer, and David McCracken, was to develop a procedure of recruitment and selection of persons with non-teaching professional degrees using the findings presented earlier to them. The second group, using the findings presented to them, was to develop a procedure for training persons with non-teaching professional degrees. This group included Jasper S. Lee, Mary Jo Hogue, Ed Faurot, Elmer Cooper, and David Williams. The two groups worked until 5:00 p.m. when the meeting was adjourned for the day.

Group work continued on April 7, 1978 beginning at 8:00 a.m. until 11:00 a.m. Group reports were then given by the group leaders. David

McCracken reported on recruitment and selection procedures and David Williams reported on training procedures developed by his group.

Final recommendations were then made by the advisory committee.

Travel report forms were completed and appreciation was expressed by the project staff for the time and recommendations given by the advisory committee. The meeting was adjourned.

APPENDIX C

Cover Letter Sent to State Supervisors

MISSISSIPPI STATE UNIVERSITY

DEPARTMENT OF AGRICULTURAL
AND EXTENSION EDUCATION
P. O. DRAWER AV
MISSISSIPPI STATE, MISSISSIPPI 39762

The Department of Agricultural and Extension Education at Mississippi State University is currently carrying out a project funded by the U.S. Office of Education to develop a program for training vocational agriculture teachers to overcome the teacher shortage in areas where it exists. The ultimate purpose of this project is to identify, describe, and evaluate the strategies used in recruiting, selecting, and training persons who have non-teaching professional degrees as teachers of vocational education in agriculture and to develop procedures for training such persons.

For this project we are interested in knowing the extent of utilization made of persons who have non-teaching professional degrees in vocational agriculture/agribusiness. These are persons who have baccalaureate degrees in agriculture, forestry, wildlife, agricultural mechanization, biological science, and related areas, but have not met the certification requirements of the various states to be teachers of vocational education in agriculture. They often do not meet full certification requirements, but are attempting to meet minimum standards of professional education to be fully certified.

The enclosed questionnaire will provide information to develop a program to train teachers of vocational agriculture/agribusiness. Also, enclosed is a form for you to provide a list of the names and complete mailing addresses of teachers in your state with non-teaching professional degrees. If you prefer, a copy of the teacher roster with the names and addresses of teachers with non-teaching professional degrees marked will be sufficient. Please return the completed questionnaire in the self-addressed, stamped envelope by September 7, 1977. Any further information, materials or suggestions concerning the project will be helpful.

Your cooperation will be appreciated.

Sincerely,

Jasper S. Lee

Jasper S. Lee, Project Director

Ronald A. Brown

Ronald A. Brown, Project Co-Director

sb

Enclosures

APPENDIX D

Instrument Sent to State Supervisors

SURVEY TO DETERMINE THE USE MADE OF PERSONS WITH NON-TEACHING PROFESSIONAL DEGREES AS TEACHERS OF VOCATIONAL AGRICULTURE/AGRIBUSINESS

Instructions

Please indicate your responses to the following questions. Your helpfulness in providing accurate information will be valuable to this study. (In this study, a non-teaching professional degree is a degree in some area other than agricultural education. The degrees are often in areas of agriculture and biological sciences such as forestry, animal science, horticulture, and biology.)

1. Is there an adequate supply of professionally trained vocational agriculture/agribusiness teachers in your state? _____Yes _____No

2. (a) Are there any persons employed in your state as teachers of vocational agriculture/agribusiness who have non-teaching professional degrees? _____Yes _____No

   (b) If yes, how many are currently employed as teachers of vocational agriculture/agribusiness? _____

3. Are persons with non-teaching professional degrees actively recruited as vocational agriculture/agribusiness teachers in your state? _____Yes _____No

4. If persons with non-teaching professional degrees are used, who has the primary responsibility for selecting them? (Check as many as applicable.)

   _____State or district supervisory personnel
   _____Local school administrative personnel
   _____Local teachers of vocational agriculture/agribusiness
   _____Other (specify)_____

   _____

5. What criteria are used in selecting persons with non-teaching professional degrees as teachers of vocational agriculture/agribusiness? (Check as many as applicable.)

   _____Educational background (individuals possess specific skills/competencies)
   _____Type of work experience
   _____Length of work experience
   _____Age
   _____FFA experience
   _____Participation in professional agricultural associations
   _____Grade point average of previous education
   _____Other (specify)_____

   _____

6. What are the state certification requirements for teachers with non-teaching professional degrees? (If possible, attach a copy of the State Certification requirements.)

   _____

   _____

   _____

7. What strategies are used in your state in training non-professional degree persons to meet certification requirements as teachers of vocational agriculture/agribusiness? _____

   _____

   _____

   _____

8. If your state uses persons with non-teaching professional degrees as vocational agriculture/agribusiness teachers, rate how they are recruited and the effectiveness of the recruitment and training strategies. The following rating scale is to be used:

0 = Not used

1 = Not effective

2 = Somewhat effective

3 = Effective

4 = Very effective

Indicate your rating by circling the appropriate number	Not used	Not effective	Somewhat effective	Effective	Very effective
How effective are the following in recruiting teachers who have a non-teaching professional degree?					
a. State or district supervisors	0	1	2	3	4
b. Teacher educators	0	1	2	3	4
c. Local school administrators	0	1	2	3	4
d. Vocational agriculture/agribusiness teachers	0	1	2	3	4
e. Other (specify)_____	0	1	2	3	4
How effective are the following techniques in recruitment?					
a. Presentations made to agricultural groups, such as association meetings, young farmer groups, adult classes, etc.	0	1	2	3	4
b. Printed materials, such as brochures, flyers, and pamphlets	0	1	2	3	4
c. Media (television, radio, and newspaper)	0	1	2	3	4
d. Exhibits at conventions, fairs, shows, etc.	0	1	2	3	4
e. Provisions by an institution for readily accepting transfer work in education	0	1	2	3	4
f. Flexibility in obtaining masters degree work while qualifying to teach vocational agriculture	0	1	2	3	4
g. Individual contact	0	1	2	3	4
h. Professional recruitment committees	0	1	2	3	4
i. Other (specify)_____	0	1	2	3	4
How effective are the following strategies in certifying individuals as teachers of vocational agriculture/agribusiness?					
a. Accepting occupational experience	0	1	2	3	4
b. Non-credit inservice programs (workshops, conferences, etc.)	0	1	2	3	4
c. Credit graduate-level college programs	0	1	2	3	4
d. Individualized learning materials	0	1	2	3	4
e. Credit undergraduate-level college programs	0	1	2	3	4
f. Giving credit for post-secondary vocational technical education	0	1	2	3	4
g. Other (If you have a specific strategy, please explain.)_____	0	1	2	3	4
_____	0	1	2	3	4

9. What are the names and addresses of the teachers in your state who have non-teaching professional degrees? Please provide us with a list of the names and complete mailing addresses of these teachers. (A copy of the teacher roster with these names and addresses checked would be sufficient.)

Name	Address

APPENDIX E

Follow-Up Letter Sent to State Supervisors

MISSISSIPPI STATE UNIVERSITY

DEPARTMENT OF AGRICULTURAL
AND EXTENSION EDUCATION
P. O. DRAWER AV
MISSISSIPPI STATE, MISSISSIPPI 39762

Recently you received a questionnaire in the mail concerning a project being conducted by the Department of Agricultural and Extension Education at Mississippi State University. The project is designed to develop a training program for non-teaching professional degree persons to become teachers of vocational agriculture/agribusiness. The survey form was to be completed and mailed to one of us by September 7, 1977. If you have returned the form, we say thanks and ask you to discard this questionnaire. If not, we would appreciate your taking a few minutes to fill it out. Your input is very important to us.

Your cooperation will be appreciated.

Best wishes.

Sincerely,

Jasper S. Lee
Project Director

Ronald A. Brown
Project Co-Director

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Enclosure

APPENDIX F

Cover Letter Sent to Teacher Educators

MISSISSIPPI STATE UNIVERSITY

DEPARTMENT OF AGRICULTURAL
AND EXTENSION EDUCATION
P. O. DRAWER AV
MISSISSIPPI STATE, MISSISSIPPI 39762

The Department of Agricultural and Extension Education at Mississippi State University is currently carrying out a project funded by the U.S. Office of Education to develop a program for training vocational agriculture teachers to overcome the teacher shortage in areas where it exists. The ultimate purpose of this project is to identify, describe, and evaluate the strategies used in recruiting, selecting, and training persons who have non-teaching professional degrees as teachers of vocational education in agriculture and to develop procedures for training such persons.

For this project we are interested in knowing the extent of utilization made of persons who have non-teaching professional degrees in vocational agriculture/agribusiness. These are persons who have baccalaureate degrees in agriculture, forestry, wildlife, agricultural mechanization, biological science, and related areas, but have not met the certification requirements of the various states to be teachers of vocational education in agriculture. They often do not meet full certification requirements, but are attempting to meet minimum standards of professional education to be fully certified.

The enclosed questionnaire will provide information to develop a program to train teachers of vocational agriculture/agribusiness. Please return the completed questionnaire in the self-addressed, stamped envelope by September 21, 1977. Any further information, materials or suggestions concerning the project will be helpful.

Your cooperation will be appreciated.

Sincerely,

Jasper S. Lee
Project Director

Ronald A. Brown
Project Co-Director

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Enclosure

APPENDIX G

Instrument Sent to Teacher Educators

SURVEY TO DETERMINE THE EFFECTIVENESS OF PERSONS WITH NON-TEACHING PROFESSIONAL DEGREES AS TEACHERS OF VOCATIONAL AGRICULTURE/AGRIBUSINESS

Instructions

Please indicate your responses to the following questions. Your helpfulness in providing accurate information will be valuable to this study. (In this study, a non-teaching professional degree is a degree in some area other than agricultural education. The degrees are often in areas such as forestry, animal science, horticulture, and biology.)

1. Are persons with non-teaching professional degrees actively recruited as vocational agriculture/agribusiness teachers, in your state?

   _____Yes _____No

2. (a) Does your department have a program to prepare persons with non-teaching professional degrees to become teachers of vocational agriculture/agribusiness?

   _____Yes _____No

   (b) If no, further completion of the survey is not necessary. Return the survey form in the enclosed envelope.

   (c) If yes, please describe your program to prepare non-teaching professional degree persons to become vocational agriculture/agribusiness teachers.

   _____

   _____

   _____

   _____

3. How effective has your program been in preparing persons with non-teaching professional degrees to be teachers of vocational agriculture/agribusiness?

   _____Not effective _____Effective
   _____Somewhat effective _____Very effective

4. How many persons with non-teaching professional degrees have gone through a program in your department in the last five years to become teachers of vocational agriculture/agribusiness?

   _____0-15 _____31-45
   _____16-30 _____45 or more

6. If your state uses persons with <u>non-teaching professional degrees</u> as vocational agriculture/agribusiness teachers, rate how they are recruited and the effectiveness of the recruitment and training strategies. The following rating scale is to be used:

0 = Not used

1 = Not effective

2 = Somewhat effective

3 = Effective

4 = Very effective

Indicate your rating by circling the appropriate number	Not used	Not effective	Somewhat effective	Effective	Very effective
How effective are the following in recruiting teachers who have a non-teaching professional degree?					
a. State or district supervisors	0	1	2	3	4
b. Teacher educators	0	1	2	3	4
c. Local school administrators	0	1	2	3	4
d. Vocational agriculture/agribusiness teachers.	0	1	2	3	4
e. Other (specify) _____	0	1	2	3	4
How effective are the following techniques in recruitment?					
a. Presentations made to agricultural groups, such as association meetings, young farmer groups, adult classes, etc. . .	0	1	2	3	4
b. Printed materials, such as brochures, flyers, and pamphlets .	0	1	2	3	4
c. Media (television, radio, and newspaper).	0	1	2	3	4
d. Exhibits at conventions, fairs, shows, etc.	0	1	2	3	4
e. Provisions by an institution for readily accepting transfer work in education	0	1	2	3	4
f. Flexibility in obtaining masters degree work while qualifying to teach vocational agriculture.	0	1	2	3	4
g. Individual contact.	0	1	2	3	4
h. Professional recruitment committees	0	1	2	3	4
i. Other (specify) _____	0	1	2	3	4
How effective are the following strategies in certifying individuals as teachers of vocational agriculture/agribusiness?					
a. Accepting occupational experience	0	1	2	3	4
b. Non-credit inservice programs (workshops, conferences, etc.).	0	1	2	3	4
c. Credit graduate-level college programs.	0	1	2	3	4
d. Individualized learning materials	0	1	2	3	4
e. Credit undergraduate-level college programs	0	1	2	3	4
f. Giving credit for post-secondary vocational technical education	0	1	2	3	4
g. Other (If you have a specific stragegy, please explain.)_____	0	1	2	3	4
_____	0	1	2	3	4

APPENDIX H

Cover Letter Sent to Teachers

MISSISSIPPI STATE UNIVERSITY

DEPARTMENT OF AGRICULTURAL
AND EXTENSION EDUCATION
P. O. DRAWER AV
MISSISSIPPI STATE, MISSISSIPPI 39762

November 28, 1977

Dear Teacher:

The Department of Agricultural and Extension Education at Mississippi State University and the U. S. Office of Education are trying to solve one of the major problems in vocational agriculture--a shortage of teachers. We are writing you because you can be helpful in developing a program to solve the problem.

We are studying the methods used in identifying, recruiting, and training people to be teachers of vocational agriculture like yourself--people with non-teaching professional degrees in areas such as forestry, horticulture, and biology.

No one can provide better information than you. Therefore, we are requesting that you help your profession by completing and returning the attached questionnaire by December 9, 1977. It will take only a few moments of your time and we have included a stamped, return envelope.

Your cooperation will be appreciated.

Sincerely,

Jasper S. Lee
Project Director

Ronald A. Brown
Project Co-director

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Enclosures

APPENDIX I

Instrument Sent to Teachers

For Office Use Only

1	2	3	4	5	6	7	8	9

SURVEY ON YOUR ENTRY INTO TEACHING

Instructions

Please indicate your responses to the following questions. Your helpfulness in providing accurate information will be valuable to this study.

1. What was your primary major on your Baccalaureate degree? (Check one.)

(1)_____Animal Science
(2)_____Forestry
(3)_____Wildlife
(4)_____Agronomy
(5)_____Horticulture
(6)_____General Agriculture
(7)_____Agricultural Economics
(8)_____Agricultural Mechanics
(9)_____Dairy Science
(10)_____Poultry Science
(11)_____Entomology
(12)_____Biology
(13)_____Other (specify)_____
_____

2. What is the highest degree that you hold?

(1)_____Baccalaureate degree
(2)_____Masters degree
(3)_____Educational Specialist degree (or equivalent)
(4)_____Doctorate degree

3. Did you enter teaching holding an emergency (temporary) certificate?

(1)_____Yes (2)_____No

If no, please do not complete the rest of the questionnaire.

4. When did you (or will you) become fully certified as a vocational agriculture/agribusiness teacher? 19_____

5. What areas of vocational agriculture/agribusiness are you teaching? Place a circle around the grade(s) in the area(s) you are presently teaching.

Areas of Vocational Agriculture/Agribusiness	Grade(s)						
(1)_____Basic Vocational Agriculture	7	8	9	10	11	12	Adult
(2)_____Production Agriculture	7	8	9	10	11	12	Adult
(3)_____Horticulture	7	8	9	10	11	12	Adult
(4)_____Agricultural Mechanics	7	8	9	10	11	12	Adult
(5)_____Forestry	7	8	9	10	11	12	Adult
(6)_____Renewable Natural Resources	7	8	9	10	11	12	Adult
(7)_____Agricultural Supplies and Services	7	8	9	10	11	12	Adult
(8)_____Agricultural Products Processing and Marketing	7	8	9	10	11	12	Adult
(9)_____Other (Please specify)_____	7	8	9	10	11	12	Adult
_____	7	8	9	10	11	12	Adult
_____	7	8	9	10	11	12	Adult

6. How many years have you taught vocational agriculture/agribusiness?

_____

7. (a) Were you enrolled in vocational agriculture/agribusiness when you were in high school? (1)_____Yes (2)_____No

(b) If yes, how many years were you enrolled in vocational agriculture/agribusiness when in high school?

(1)_____1 (3)_____3
(2)_____2 (4)_____4 or more

8. (a) Were you an FFA member in high school?

(1)_____Yes (2)_____No

(b) If yes, how many years were you an FFA member when in high school?

(1)_____1 (3)_____3
(2)_____2 (4)_____4 or more

9. What type of work experience do you have? List below the jobs you have held and how long you were employed at each job.

Work Experience	Length of Employment
_____	_____
_____	_____
_____	_____

10. List below the name and complete mailing address of the person at your school to whom you are immediately responsible. (This may be a principal, vocational director, or other person.)

Name_____

Title_____

P. O. Box or Street_____

City_____State_____Zip_____

Please respond to the questions below using the following rating scale:

0 = Not used

1 = Not effective

2 = Somewhat effective

3 = Effective

4 = Very effective

Indicate your rating by circling the appropriate number

	Not used	Not effective	Somewhat effective	Effective	Very effective
11. How effective were the following individuals in influencing you to become a teacher of vocational agriculture/agribusiness?					
a. State or district supervisors	0	1	2	3	4
b. College teachers in agricultural education	0	1	2	3	4
c. Local school administrators	0	1	2	3	4
d. Vocational agriculture/agribusiness teachers	0	1	2	3	4
e. Other (specify)_____	0	1	2	3	4
12. How effective were the following in influencing you to become a teacher of vocational agriculture/agribusiness?					
a. Presentations made by agricultural groups, such as club meetings, young farmer groups, adult classes, etc..	0	1	2	3	4
b. Printed materials, such as brochures, flyers, and pamphlets	0	1	2	3	4
c. Media, such as television, radio, and newspapers	0	1	2	3	4
d. Exhibits at conventions, fairs, shows, etc.	0	1	2	3	4
e. Provisions by an institution for readily accepting transfer work in education	0	1	2	3	4
f. Flexibility in obtaining masters degree work while qualifying to teach vocational agriculture	0	1	2	3	4
g. Personal contact by other people in agricultural education	0	1	2	3	4
h. Recruitment by professional committees	0	1	2	3	4
i. Other (specify)_____	0	1	2	3	4
13. How effective were (are) the following in helping you to become qualified as a teacher of vocational agriculture/agribusiness?					
a. Acceptance of past work experience	0	1	2	3	4
b. Non-credit inservice programs (workshops, conferences, etc.)	0	1	2	3	4
c. Graduate-level college study	0	1	2	3	4
d. Individualized learning materials	0	1	2	3	4
e. Undergraduate-level college study	0	1	2	3	4
f. Post-secondary vocational technical education	0	1	2	3	4
g. Other (specify)_____	0	1	2	3	4
_____	0	1	2	3	4
_____	0	1	2	3	4

APPENDIX J

Cover Letter Sent to Immediate Supervisors

MISSISSIPPI STATE UNIVERSITY

DEPARTMENT OF AGRICULTURAL
AND EXTENSION EDUCATION
P. O. DRAWER AV
MISSISSIPPI STATE, MISSISSIPPI 39762

January 4, 1978

As a school administrator, you are probably well aware that a shortage of vocational agriculture teachers exists. Many schools have employed persons who did not meet full certification requirements to teach vocational agriculture. These persons are well qualified in terms of technical skills but lack the needed professional education courses. After employment, they take the courses needed for certification.

Our University and the U. S. Office of Education are currently studying how these persons are prepared to meet certification requirements. This is where we need your help. Your school has been identified as one which currently employs a vocational agriculture teacher who graduated from college with a strong technical background but who lacked the needed professional education. Your assistance in helping us evaluate how they acquire the needed professional education will be appreciated. Please complete and return the enclosed survey form by January 18, 1978. A stamped return envelope is enclosed.

Best wishes for a prosperous New Year.

Sincerely,

Jasper S. Lee
Project Director

Ronald A. Brown
Project Co-director

et

Enclosure

APPENDIX K

Instrument Sent to Immediate Supervisors

SURVEY TO DETERMINE THE EFFECTIVENESS OF STRATEGIES
USED IN TRAINING INDIVIDUALS AS TEACHERS
OF VOCATIONAL AGRICULTURE/AGRIBUSINESS

Instructions

Please indicate your responses to the following questions. Your helpfulness in providing accurate information will be valuable in this study. (As used here, a non-teaching professional degree is a degree in some area other than agricultural education. The degrees are often in areas such as forestry, animal science, horticulture, and biology.)

1. Please rate the effectiveness of the strategies listed below in training persons with non-teaching professional degrees to be teachers of vocational agriculture/agribusiness. The following rating scale is to be used:

0 = Not used
1 = Not effective
2 = Somewhat effective
3 = Effective
4 = Very effective

Indicate your rating by circling the appropriate number.

How effective are the following in preparing individuals as teachers of vocational agriculture/agribusiness?

		Not used	Not effective	Somewhat effective	Effective	Very effective
a.	Having the teacher under the direction of an experienced teacher.	0	1	2	3	4
b.	Non-credit inservice programs (workshops, conferences, etc.).	0	1	2	3	4
c.	Graduate-level college study	0	1	2	3	4
d.	Undergraduate-level college study.	0	1	2	3	4
e.	Individualized learning materials.	0	1	2	3	4
f.	Supervision by personnel from the state education agency . .	0	1	2	3	4
g.	Supervision by a teacher educator from a nearby university .	0	1	2	3	4
h.	Other (please explain) _____					
	_____	0	1	2	3	4
	_____	0	1	2	3	4

2. How inclined are you to hire another person to teach vocational agriculture with a non-teaching professional degree? (check one)

_____ Not at all _____ Somewhat _____ Very much

3. What areas do these individuals lack most in their training? (Check as many as apply.)

a. _____ Knowledge of the FFA
b. _____ Methods and techniques of teaching
c. _____ Knowledge of subject matter and technical skills
d. _____ Establishing and using public relations
e. _____ Planning summer programs
f. _____ Developing lesson plans
g. _____ Classroom management, including discipline
h. _____ Laboratory management, including discipline
i. _____ Knowledge of supervised occupational experience programs
j. _____ Knowledge of adult programs
k. _____ Organizing advisory committees
l. _____ Other (please list) _____

_____